



Accurate and objective, it speaks for Britain
 in the far corners of the earth

WHEN Russian author Boris Pasternak died, in disgrace with the Soviet Government because of his novel *Dr. Zhivago*, advance details of his funeral were officially suppressed. Yet hundreds of Muscovites poured out to the near-by village of Pere-delkino on the right day to pay their last respects. How did they learn the time and place? From a BBC broadcast.

A visitor to Beirut protested when his taxi driver took a roundabout route. "I can't go the shortest way," explained the driver. "Fighting has just started in the streets." "How do you know?" asked the visitor. The driver pointed to his car radio. "I heard it from London."

At a Warsaw dinner party a British diplomat mentioned to his neighbour, the wife of a Polish vice-minister, that he rose at 7 a.m. to

listen to the news in English from London. "Our day starts much earlier," she replied. "My husband always gets up at six to hear the news in Polish—also from London."

The source of the information on which these people relied is the External Service of the British Broadcasting Corporation. At its headquarters in Bush House on London's Strand, more than 2,000 men and women of some 50 different nationalities originate programmes which are broadcast round the world from 70 transmitters in Britain and overseas. Many are then re-broadcast from local stations in 140 countries.

In the international battle for people's ears and minds, Russia and its satellites mount the biggest weekly offensive with 3,202 hours of broadcasting; next comes the United States with 1,829 hours, then China

with 1,615 and West Germany with 792. But Bush House officials estimate that the BBC, broadcasting for only 721 hours a week, has more listeners than any of the other stations—and far greater influence.

Some of the tens of millions of people, spread over almost every country on earth, who tune into the BBC regard London as the cultural centre of the world; others need to learn English. Technologists want to hear about British industrial developments, merchants note new products to import, businessmen require the Stock Exchange prices. Sports fans like to hear the football results; so do the punters of West Africa, where at one time local pool promoters wouldn't pay out until the BBC broadcast the scores. Scholars in the Near East enjoy hearing impeccable Arabic; Czech teenagers rave over the "Prague cockney" accent of a popular disc jockey.

Sticking to Facts. The External Service's greatest attractions are the news broadcasts. "I heard it on the BBC" is a hallmark of truth; when a major Middle East banking firm crashed in 1966, it is said that many Persian Gulf investors refused to believe it until the BBC broadcast the news. At times of crisis—in the recent war in Bangla Desh, for example—its world audience swells as people tune into London for unbiased news presented in the distinct, measured tones BBC news-readers adopt to overcome long-distance receiving problems. Says one Indian listener, "The BBC is like a London

policeman—courteous, fair and unexcited by big events, a little slow, perhaps, yet able to move with astonishing speed when necessary."

The news comes from the BBC's own correspondents, the world's news agencies, and monitored broadcasts from 120 countries. Every story, except those from BBC reporters and agency men of unimpeachable reliability, must be confirmed by at least one other source before it is broadcast. "We daren't take a single risk," says Robert Gregson, editor of the non-stop World Service Programme in English. "Our credibility is our chief asset."

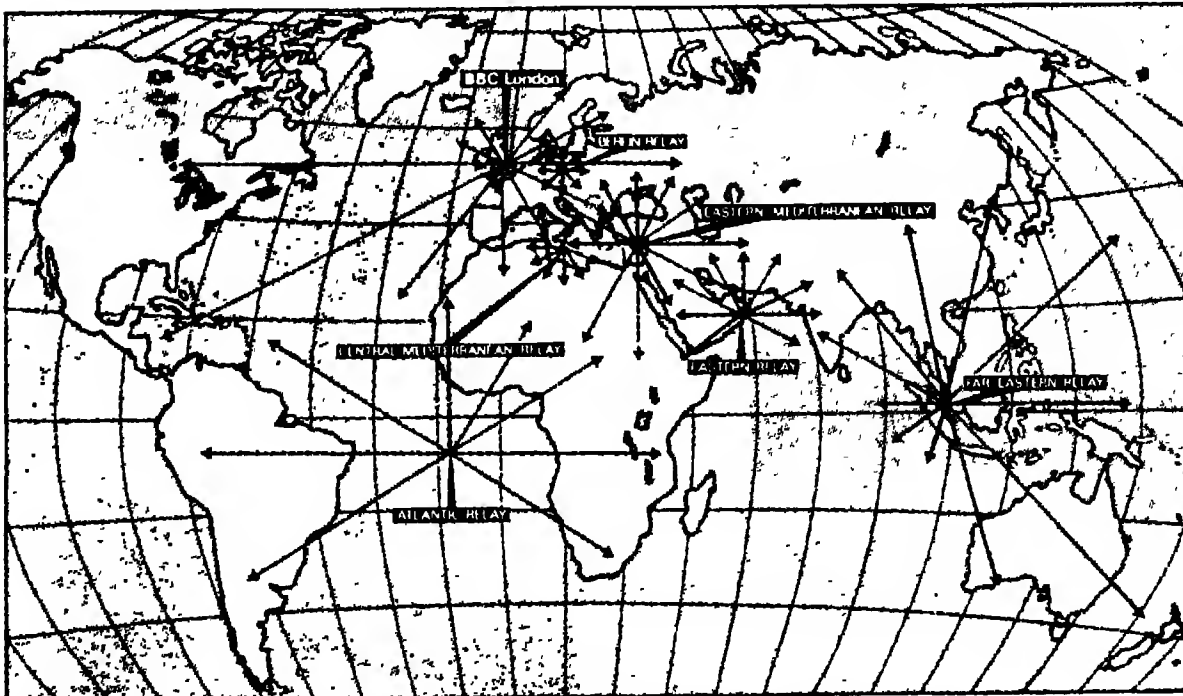
This insistence on double checking can lead to infuriating delays. An exasperated programme chief once told a news editor, "You people would doubt Vatican Radio on the election of a Pope." Unmoved, the editor replied, "We should expect to get the news first from our own correspondent in St. Peter's Square."

Over the years, accuracy has earned the bulletins an unrivalled reputation. Even the opposing sides of warring nations believe them. "If the BBC Vietnamese service announced that our Prime Minister was dead," smiled Ton That Thien when he was South Vietnam's Information Minister, "and next morning he was seen walking down the main street of Saigon, nobody would recognize him." And an American journalist who fell into Communist guerrilla hands in Cambodia reported that his captors, who

listened more frequently to London than to their local stations, assured him: "This is the BBC. This is not propaganda."

In fact, it *is* propaganda. The BBC's External Service exists for the sole purpose of presenting Britain to the world: it is financed by State funds—Rs. 23.75 crores last year. What makes the BBC unique is that

as a link between the peoples of the Commonwealth. In 1938 an Arabic programme went on the air to counter Mussolini's anti-British broadcasts from Radio Bari. Later that year, as war threatened, the European Service sprang up almost overnight, adopting the same high standards as the domestic programmes.



BBC overseas radio transmissions from the United Kingdom cover the world, using a network of six strategically positioned signal relay stations

nobody, not even the Government which provides the money, can tell it what to say. Free from any obligation to suppress or mould news to suit official policy, the BBC tells the truth as far as it is humanly possible.

This freedom is guaranteed by its Royal Charter, first granted in 1927 before overseas broadcasting was envisaged. Five years later the Corporation started the Empire Service, financed out of its existing budget,

Confused by Nazi lies, the people of Occupied Europe risked death to hear London, and found to their astonishment that it reported Britain's defeats as objectively as its victories. During the long months of apparent setbacks the people of Europe learned that the BBC always told the truth, no matter how unfavourable. Its network of informers across Europe, reporting back by methods that are still secret, soon

won the BBC a reputation for being all-knowing.

Enslaved Poles got new heart when London told them, only four hours after it happened, that the Polish Underground had executed a Nazi general. Josef Goebbels, Hitler's Propaganda Minister, fumed when the BBC's German Service commented on his weekly article in *Das Reich* before its appearance on the Berlin news-stands. Men in remote French villages waited for the coded messages from London telling them when and where a consignment of arms would be dropped.

By 1945 everybody in Occupied Europe—and many Germans—believed the BBC. Its immense audience trusted it so completely that on D-Day, when General Eisenhower used it to issue instructions to civilians, entire nations obeyed unquestioningly.

Stream of News. On a busy day a million words of information and background material may flow into the External Service's third-floor newsroom, where more than 100 journalists prepare the 200 bulletins, in 36 languages, that are transmitted every 24 hours. Every word of news broadcast from Bush House, except in the English-speaking World Service, has to be translated, then checked, both linguistically and factually, by polyglot supervisors—one of whom has mastered 28 languages.

A cosmopolitan staff of 150

men and women language assistants, carefully recruited from all over the world for accuracy, speed and integrity, work round the clock preparing programmes. The Russians, Poles, Czechs, Hungarians, Bulgarians and Rumanians are usually naturalized British subjects, but most of the others return to their own countries after a five-year stint with the BBC.

Honest Opinion. The BBC avoids meddling in other nations' politics, but it never leaves listeners in doubt about the reactions of the British public on matters of world importance or where basic human rights are infringed. When Anthony Grey of Reuters was imprisoned in China for some 26 months, the Far Eastern Service spoke plainly. Says Hugh Howse, its chief: "We made no bones about reflecting the tremendous anger and concern of the British people."

Everybody in Bush House is constantly reminded of the need for the utmost objectivity. The temptation to "editorialize" in news bulletins is sternly resisted; sub-editors pounce on a phrase like "The troops had to open fire" and change it to the strictly factual "The troops opened fire."

"Objectivity itself can be explosive in a totalitarian country," says James Monahan, who retired last year as the Service's Director of Programmes. "A typical BBC news bulletin may report a strike in Britain, the defeat of a candidate in

a by-election, a ministerial speech containing facts and figures about British workers' living standards, an Opposition speech strenuously attacking the Government's policy. Such a bulletin, heard by the people of a country without democratic freedoms, is full of danger—to the totalitarian government."

The Soviet Government attempts to keep such "subversive" material out by jamming foreign broadcasts, a technique described by a BBC executive as "an admission of failure in argument and a costly and inefficient way of shouting the other fellow down." More than 100 Russian transmitters continue to jam foreign broadcasts. Nevertheless, reports from listeners show that jamming is effective only in parts of the biggest cities.

Good Reception. A senior Soviet official stationed abroad told Alexander Lieven, head of the East European Service, that when on leave in Moscow he was involved in an argument with a cousin from Tula, 160 kilometres away, and told him, "You've never been outside Russia and know nothing, whereas I live abroad and know all the facts." "But for two months you've been here in Moscow," replied the cousin. "I live in Tula and can listen to the BBC!"

The BBC strives hard to make contact with its audiences. Announcers invite listeners in free countries to send in their questions, music requests and programme

suggestions, and last year more than 300,000 such letters were received. Most countries have panels of listeners who report on programmes.

BBC executives on duty tours of their regions are almost invariably welcomed as old friends. When he was the Service's Middle East representative, Raymond Ebsworth travelled into the wilds of North Yemen as the only European in a ramshackle bus full of fiercely bearded tribesmen festooned with bandoliers, rifles and daggers. They watched him suspiciously, muttering among themselves, and eventually one man demanded to know what he was doing in their country.

Ebsworth nervously explained that he was from the BBC, and instantly the atmosphere cleared. The fearsome-looking tribesmen turned into admiring fans who treated him to eggs and coffee at every halt, and crowded round with well-informed questions about the Arabic Service broadcasters whose voices they heard on their portable radios.

What does the British taxpayer, who foots the bill, get out of the BBC's External Service? Nothing, directly; apart from a few World Service transmissions, he cannot expect to pick up its broadcasts satisfactorily. But there are important benefits to the nation as a whole. Day and night the BBC tells the world about British advances in science, commerce, agriculture and technology. It informs potential customers about forthcoming British

READER'S DIGEST

trade missions. "All doors were already open to me—thanks to the BBC," wrote one businessman after a profitable visit to Tripoli.

The BBC is probably Britain's best export salesman, for some of its prestige rubs off on the products it features in such programmes as "New Ideas," and thousands of enquiries flow into Bush House, whence they are passed on to manufacturers. In this way the makers of an anti-theft car-locking device won a Rs. 19 lakh order from the United States; a firm which had never exported previously found itself with dozens of orders for a new type of stretcher, and a manufacturer of portable cement mixers, writing to

tell Bush House of enquiries from 43 countries, added: "Help! And thank you."

The greatest benefits cannot be measured in terms of export sales. Every day, as the number of transistor receivers soars—there are now 800 million radio sets in the world, compared with 237 million in 1955—the ears of more people in more countries are opened to the BBC.

No longer able to impose peace by military might, Britain still plays a significant world role by interpreting one nation to another with a special quality more powerful than any transmitter, more persuasive than polemics—the plain truth from London.

Mixed Doubles

A WOMAN struck up a conversation with the small son of her new neighbour. "I understand that you have two sets of twins at your house," she said. "That's wonderful! Are you one of the twins?"

"No," was the youngster's gloomy response. "I'm just a spare."

—F. G. Kerman

IN THE church nursery class one Sunday, our daughter was playing with one of a pair of identical twins. Later she went to the front of the nursery and saw the other twin. Clearly puzzled, she looked from one twin to the other. Finally, she went up to the young woman in charge, pointed and said, "Do you know there's some more of her back there?"

—Mrs. William Kunkel

TWO OF the new students registered in my creative painting class were identical twin boys, eight years old. When I noticed that the boys were enrolled in different schools, I asked one of them why.

"Well," he said, pointing accusingly at his brother, "he was always making trouble—and then they found out it was me!"

—Louise Holmes

The Greatest Art

By MYLES CONNOLLY

HENRY THOREAU, the nineteenth century writer, naturalist and philosopher, said: "It is something to be able to paint a particular picture, or to carve a statue, and so to make a few objects beautiful; but it is far more glorious to carve and paint the very atmosphere and medium through which we look . . . To affect the quality of the day—that is the highest of arts."

He is trying to remind us that great art is not restricted to painting, music, sculpture and writing. There is an art of living, too.

Thoreau makes us think of people like St. Francis of Assisi, Gandhi, Florence Nightingale—people who, through the nobility of their lives, affected the "quality of the day." There is no limit to the number of such artists. It includes the countless obscure, good people who quietly affect the lives of those about them without even being aware they are doing it, winning

no commendation, expecting none.

Everybody must at one time or another have known people—strangers, as well as friends—who have changed the quality of the day. They come into a room in a dark hour—a sick-room, say, or a death room, a room without hope, or merely in an hour when we are lonely or discouraged. They may say little, if anything. But the shining quality of goodness radiates from them, and where there was dark there is light, or the beginning of light; where there was cowardice there is courage; where there was listlessness there is love of life.

These friends—or wonderful strangers, met at a picnic, in a life-boat, in a hospital waiting-room—all these, humble and unaware, carry with them the kindness and generosity of their lives. These, it seems to me, are the greatest artists, for they practise the highest of the arts—the art of life itself.

The Tyrant of Guinea



Ahmed Sékou Touré, once his people's liberator, now runs one of Africa's most oppressive police states

By DAVID REED

WHEN he is in a good mood, he is one of the boys. He beams, claps you on the shoulder, and laughs heartily. But when the talk turns to the "traitors" who would destroy all that he has sought to create, his eyes blaze, his face hardens, his voice grows menacing.

Ahmed Sékou Touré, President of the West African republic of Guinea, is one of the most brilliant leaders that Africa has ever produced. But he is also a miniature Stalin, a man who has unleashed a reign of terror in Guinea the like of which independent Africa has seldom seen. Some 2,500 Guineans have disappeared into his prisons. Dozens, perhaps hundreds, have been executed, all without trial. An estimated 700,000 people, one-sixth of Guinea's 1960 population, have fled.

A French colony until 14 years ago, Guinea is one of the smallest countries in Africa, with an estimated remaining population of about 3.5 million. It is almost bankrupt and possesses little effective military power. Yet Touré commands not only the respect of black Africa but the support of important segments of both the communist and capitalist worlds. A Russian naval task force, stationed just over the horizon from Conakry, his sunny, seaside capital, helps keep him in power. The Chinese have launched a big aid programme to shore up his regime. Fidel Castro has sent him several

hundred black Cuban soldiers to train his militia. The United States has poured in over Rs. 83 crores of aid. Even West Germany lavished Rs. 17.5 crores on him before its embassy was ignominiously expelled on his orders.

Why does everyone pay such attention to this man? The communists see him as a revolutionary they ought to cultivate. America cultivates him partly to counteract the communists but more importantly because of the bauxite (aluminium ore) he controls: American firms have invested more than Rs. 100 crores in two international consortia which operate bauxite mines in Guinea.

Many Africans, at the same time, regard him as the Simón Bolívar of that continent—the man who, like David against Goliath, defied Charles de Gaulle, hastened Guinea's independence and who now speaks up on behalf of the blacks in southern Africa.

But this same man has turned his own country into an echo of Russia during the Great Terror of the 1930s. Guinea's people are shut off from the rest of the world. There is no newspaper, and no magazines or books worthy of the name are available, only dreary ideological tracts, most of them written by Touré himself. When officials answer their phones, they bark, "Ready for the revolution!" At night, militiamen and citizen guards toting Russian AK-47 automatic

rifles set up barricades every few streets, check identity papers and conduct searches of cars. On my first day in Guinea I was warned not to walk through a park in front of Touré's palace because "the guards might shoot."

The present terror in Guinea was precipitated nearly two years ago by a bizarre raid on Conakry. Guerrillas, whom Touré had allowed to use his territory as sanctuary for attacks against neighbouring Portuguese Guinea, had captured some 50 men in that territory and lodged them in one of Touré's jails. In revenge, an expeditionary force of some 350 men was dispatched by sea from Portuguese Guinea, landed in Conakry and freed the prisoners.

Swift Reprisals. Stung by the ease with which this raid had been carried out, and fearful that Guinea was slipping from his grasp, Touré lashed out at the "traitors." He imprisoned 17 out of 24 cabinet members, 90 per cent of the army's senior officers, including the commander-in-chief, 14 of 29 provincial governors, two former ambassadors to Washington, the Roman Catholic Archbishop of Conakry, the chief of his own bodyguard, scores of civil servants, doctors, engineers and other educated people. Even Touré's personal doctor, a friend since childhood, was swept up.

Some time later, Radio Conakry began broadcasting "confessions" of many of those arrested (obtained, it has been reported, by refusing to

give them food and water until they complied). Then one morning, people going to work saw four bodies hanging from an overpass near the main part of Conakry—three cabinet secretaries and a police commissioner. Subsequently, other executions were held in provincial capitals. Sources in Guinea say that schoolchildren were summoned to watch and, in some cases, petrol was poured over the live victims and set alight.

Dire Poverty. Potentially, Guinea is a rich country, endowed with farmland, minerals, and a huge potential for hydro-electric power. Yet Touré's socialism is a disaster. The country's coffers are empty, the currency almost worthless. Prices have rocketed. The average worker in Conakry earns about 12,000 Guinean francs a month, and a shirt can cost 10,000 to 15,000. Vast amounts of Guinea's produce—rice, coffee and beef—are smuggled to neighbouring countries for sale, the farmers being unwilling to accept near-worthless Guinean francs for their labour.

Conakry is a dead city. One sees skeletons of unfinished buildings, abandoned when the French left. Department stores have been nationalized, and the shelves are now literally bare. Conakry's harbour is silting up, its equipment is old and rickety, and most shipping lines avoid it. The streets are half-deserted.

Day and night, refugees continue to slip across the borders. Most are

peasant farmers, driven out by economic conditions, but the refugees have included a large share of the educated *elite*, the people on whom Guinea's hopes for a better future might have rested. One example: fewer than ten Guinean doctors are left.

One thing does prosper in Guinea, the bauxite mines. Western aluminium companies have always got on well with Touré, because the huge, 12-year-old Fria bauxite operation is one of the few enterprises in his battered economy that functions. Last year, Fria yielded Touré Rs. 8.75 crores, at least two-thirds of his meagre supply of hard currency. Another international consortium is opening a mine in the Boké region which, when in full production, will boost total revenues to the Government to at least Rs. 24 crores a year.

Early Start. Ahmed Sékou Touré was born in Guinea 50 years ago. Expelled from school at the age of 15 for leading a student strike, he took correspondence courses and became a postal clerk. Soon, he had organized the postal workers into a union and fought colonial officials for better pay. Favoured by socialist politicians who were then in power in Paris, he rose swiftly as a political leader and, in 1956, became mayor of Conakry. To get his way, he sent groups of hired thugs to beat up political opponents and burn their houses.

Two years later, when de Gaulle offered all 13 French colonies in

Africa their choice of semi-independence in a "French community" or of going it alone as an independent state without subsidies, Touré led Guinea into voting for a full break—the only colony that did. Determined to teach the upstart a lesson, de Gaulle ordered French officials to leave Guinea at once.

They took with them all official records, including Touré's birth certificate, removed desks and typewriters, even ripped out telephones. Guinea, which had about six university graduates and had been receiving nearly half its budget from France, seemed on the brink of collapse.

But soon after the French departure, the communist countries rushed in to prop up the country with substantial aid programmes. A number of Western powers followed suit.

Today the great powers still come to Conakry. Russia and China each have about 1,000 aides in the country. They vie furiously. Guinea's leading technical-training institute is staffed mostly by Russians. The Chinese are active in rice cultivation and health programmes. Shrewdly, Touré has declined to take sides in the Sino-Soviet dispute, leaving them to outbid each other in courting his favour.

Indeed, he is coldly disdainful to almost everyone. On one occasion, he put the entire American embassy under arrest, forbidding them to leave their offices, and sent a mob

which broke into the ambassador's residence while his wife and children huddled upstairs.

Other Western embassies have fared even worse. After innumerable rows, France broke off relations. The British were ousted because of Rhodesia. The Israelis got the heave-ho because of the Six Day War. Twenty UN technicians were sent packing recently for some reason or other. It was the West Germans, however, who got the full treatment. Accusing them of subversion, including complicity in the Portuguese raid, Touré broke off relations and expelled the West Germans so suddenly that some arrived by plane in the European winter clad only in nightwear.

Dedicated Worker. Now middle-aged, his hair flecked with grey, Touré retains all the brawling energies of his early years. Like Stalin, he prefers to work at night, and councils of state are sometimes held in the small hours. As a result, nothing gets done at the top levels of government until late in the morning, when yawning officials turn up after a hard day's night at the palace.

While most African rulers live amid monumental corruption and regal ostentation, Touré pursues a simple life and sees to it that his regime is virtually free of corrupt practices. His official residence is called a palace but is unpretentious. When he meets visiting heads of state at the airport, he pops into the driver's seat and chauffeurs the

startled guest back to town. Cigarette dangling from his lips, he steers with one hand and, with the other, waves a handkerchief at the crowds. All the while, he directs a rapid monologue at the guest. There is no danger, however, of a collision with another car. For two hours in advance, the road is always cleared of traffic and, just in case "fifth columnists" have a trick up their sleeves, it is lined with armed militiamen.

One evening my colleague and I were summoned to the palace. More than a dozen officials, men fortunate enough to have survived the purge, were gathered in Touré's office, in which hangs a large photograph of Lenin. They sprang to attention as Touré, clad in khaki uniform, strode in. As we talked, he acknowledged that his economy was in bad shape. But that was not important. "Before you make an economy, you make a people!" he thundered in a voice

that has mesmerized so many for years. "Our dignity will be our riches," he said, eyes blazing. "Who helped the American people get where they are? No one! Why shouldn't Guinea do the same?" When we left, Touré bubbled good cheer and gave me a keepsake: a volume, autographed by himself, of the confessions of "traitors" who have disappeared into his prisons.

If the ruination of the economy is any indication, Touré will not achieve the ambitions that he has set for his country. But, barring what is called an unforeseen circumstance, he will be around for a long time, and his voice will continue to reverberate across Africa—and beyond. It is unlikely that either the Russians or Chinese will ever be able to count him in their pockets. He is too combatively independent for that. All the while, the Guinean people will remain condemned to a twilight existence under totalitarian rule.

Summing it Up

THE EXHIBITION portrayed the advancement in technology of statistical and calculating machines from the abacus to the computer. After completing the tour I stopped at the reception desk to ask a question. There, a distinguished elderly gentleman was keeping track of the number of visitors in the old tried-and-true method of drawing on a sheet of paper.

—Enid Bimbaum

Past Error

FRENCH author François Mauriac had a keen sense of repartee. At a dinner party one evening, Jean Cardinal Daniélou explained that sin was an obsolete concept today. Mauriac, bristling, asked fiercely, "Couldn't you have told me that sooner?"

Asmodée in *L'Aurore*, Paris

The Listener His Way to College

BY BERT KRUGER SMITH

Words baffle Murry; he cannot read or write them. But he is, nevertheless, a brilliant student

THIS is Murry's story. But he will not be able to read it, though he is 34 years old, has better than average vision and attends university.

If you talk to him, you will not know anything is wrong. Yet something is. Call it what you wish—dyslexia, minimal brain dysfunction, neurological impairment. The reality is that he cannot read and probably never will.

But he can learn, and that he will continue to do. In the same way that a blind man needs his cane in order to “see,” or a diabetic his insulin, Murry relies on a tape recorder to gather in and let him hear the words—the endless, numerous, difficult words which, written, make messages he cannot decipher.

It's frustrating, often disappointing—this having to rely on a machine to “read” for him. Still, Murry is luckier than the majority of those with special learning disabilities. Many of them with potential as great as his tend to be labelled “stupid” or “incapable” or “retarded.”

Until he started school, Murry Dwayne Thompson had no special problems. It was only when he came into the classroom that life became painful. He could not copy what the teacher put on the blackboard. He could not form letters. Numbers baffled him: he could “see” them, but could not make them behave in arithmetical formulas. Only at drawing could he succeed.

Yet the hunger to know drummed

a constant beat within him. He learned everything he could without the use of reading. He took apart and put together clocks and mechanical objects. He could sketch and paint. At school, he devised means to cope so complex they used all his energy. As he moved from one form to another ("polite" promotions), he learned to sit at the back where the teacher might not see him. If called upon to read, he might parrot a passage that he had heard someone else read. On special projects, he sometimes swapped maps or sketches for essays or solved problems. On tests, he developed ingenious methods of cheating.

He did not know what was wrong. How was he to understand that, for other people, words stood still and did not move, reverse themselves, or change into other forms with their usage? All he knew was that he could not do what other children could. He was stupid!

Murry's parents alternated between encouragement and despair. His mother, a school-teacher, recognized the many skills he had outside school. His father wanted him to be an engineer, and many nights he would try to help Murry with his homework.

Murry struggled, but his eyes saw one thing while his mind saw something different. He would begin to sweat; his hands became numb. Soon his father grew impatient, then furious. "You're not trying!" he would shout. Yet Murry

was trying with everything he had.

By the time he was 15, Murry towered above his 11- and 12-year-old classmates. One teacher in particular took notice and demanded that he read. When he could not, she recommended to his mother that he be put in a class for retarded youngsters. Murry's mother refused, and so the tall, chubby teenager became a school "push-out." Without a marketable skill, he began to look for a job.

Once again, Murry brought his amazing coping skills into play. Asked to fill in an employment application, he faked a sudden appointment and asked if he could return the form later. Then his mother filled it in for him. On a job, he followed other workers if a task required reading—or even to locate the men's lavatory or cafeteria.

On the Fringe. He was too old to be a child, too immature and unskilled to be a man. He existed on the perimeter of life, observing, feeling, longing, with a hurt too deep for pain. At home he sketched and made up songs on his guitar.

The years passed. Murry's skills increased; his ability at coping rocketed. He learned to drive a car. He would order in a restaurant by asking the waiter for the speciality of the house. For two and a half years he was a reserve policeman—and could not write a traffic ticket! Instead, he would ask the driver to write his own, or would copy words his mother had written down and

which he knew where to place on the ticket.

Murry might have completed his years in that fierce, self-defeating struggle to keep his shameful disability hidden. But one day, when he was 22, he returned home early from work, dispirited, discouraged, and found the television set tuned to an educational programme. Before Murry could move on, his attention was caught by a conversation about Zen Buddhism. Although many of the words were beyond his vocabulary, the ideas—the marvellous, exciting, intriguing ideas—were not. He felt a rush of hope. He was not stupid. He *could* learn.

A new life began for Murry. He “programmed” the TV discussions on many subjects and managed to get home in time to hear them. If a book was recommended, Murry bought it and gave it to several friends to read. Then he engaged them in discussion about it, probing their minds and reactions.

Soon he moved into a little house of his own, and began painting and composing music. All the while his thirsting mind “drank” the knowledge offered on the television screen. But he hungered to know more, to read, to learn, to discover new facts. He was tired of his energy-draining cover-up mechanisms. After a time, he started to suffer severe headaches and stomach cramps, and his hands began going numb.

When a physical examination

showed no abnormality, the doctor asked Murry if anything were troubling him. Should he reveal himself at last? Murry decided to risk it. “I cannot read or write,” he said.

When Murry eventually lifted his eyes, he found the doctor writing a prescription. “This will quiet your nerves,” the doctor said. And Murry left the office convinced that he was a freak.

The Explanation. Several years later, Murry’s concerns again turned into physical symptoms. And again after the examination a doctor said, “Is something troubling you?” Once more he gathered the courage to say, “I cannot read or write.” However, this time the response was, “I have heard of your problem. I know a doctor who may be able to help you.”

The anchors of deception and coping which had held him fast were now cut loose, and Murry bobbed on a wave of hope. There were others like him! He was not alone, not a freak. His ailment even had a name—dyslexia.

What did the word mean? Friends looked up the origin and discovered it was Greek for “poor reading.” “*Poor* reading,” Murry thought to himself. “*No* reading would be more like it.”

Murry soon discovered that definitions of dyslexia and theories about cause and treatment, were almost as numerous as was the learning-disabled population. The disorder occurs five or six times as

frequently in boys as in girls. Some authorities defined the problem as one of "slow maturation." Some attributed it to neurological factors; some to an injury before, during or shortly after birth; others to a biochemical disorder. A number felt that there had to be some genetic component to it.

At any rate, Murry found his own inabilities mirrored in the definitions, which said that children with dyslexia often have some particular difficulty in learning the meaning of verbal symbols. Sometimes they cannot perceive the visual differences between various words or letters; or they cannot hear the differences in the sounds.

Some of these children may be taught, through reinforcement, which is their right and which is their left hand, but often they cannot translate that learning into action. Told to "write your name in the top right-hand corner," they get muddled.

However, dyslexics who are diagnosed early and helped properly can often attain ability to read adequately.* And on occasion, even dyslexics without proper instruction have been known to improve with age. Hans Christian Andersen was a late bloomer in reading and arithmetic and never mastered spelling.

Breathing deeply of the air of

promise, Murry went through many tests and began working with a series of experts. Eventually he was able to apply logic to some logical words. A teacher helped him learn sounds of letters rather than names. He had auditory training to discover that words were made up of individual sounds blended together into a unit, and traced letters on the palm of his hand as he sounded them. He began to be able to recognize some combinations. Discouragingly, he seemed to be unable to learn to read adequately, because of age or extent of disability. But he could now recognize certain signs, which helped him to find his way about.

Knowledge Hungry. Friends persuaded Murry, while working to keep himself, to attend a course or two at a local college. They read assignments to him, grilled him on test questions, gave him faith in his ability. At the end of the fourth week, Murry told his psychology instructor of his reading problem. Would she let him take examinations orally? She agreed, and Murry went on to earn a top grade, the first in a school career of "Unsatisfactory" and "Below average" reports.

Now Murry realized that he was not limited in learning, only in method. After two terms of college, he applied to a university—without a secondary school certificate, and without being able to read a single line. He was admitted.

Murry was now ready to aim at

* For information about the condition and the help available, write to the School for Children in Need of Special Care, Sewri Hill, Sewri, Bombay.

a vocational goal. He was intrigued with psychology and committed to art; therefore he decided to go into art therapy. His degree course includes classes in sociology, psychology, history and art. The hours it takes him to absorb the necessary amount of knowledge cannot be calculated. Every extra waking minute is directed towards listening to the patient tape recorder which feeds information into his hungry mind. Nevertheless, he has maintained a brilliant scholastic average.

What lies ahead for Murry? Because his dream is so great and has been so long in coming, he is fearful even of saying that he will acquire a degree. He simply lives one term at a time, working towards that ultimate goal.

Marriage? Who knows? Right

now Murry's art scholarship and occasional part-time work barely sustain him. Besides, his studies take so much energy that he feels he has no emotional substance left over for a real marriage.

But Murry, open to life, continues to learn. He is a well into which the sweet waters of experience and knowledge keep falling.

Murry's story is one of individual success. But it must be more than that. Brilliant Murry, who has demonstrated the determination and ability to learn without reading, can be symbol and spokesman. His victory may give hope to people who have suffered from learning disabilities for years. It may make others aware of the needs of many children, "beginners" in the fight against learning disabilities.

Crossed Line

REPORTER Michel Leblanc was sent to cover the terrible earthquake at Skopje, in Yugoslavia. Having got his story, he still had to send it back to Paris. But the post office had fallen down. Nothing was left but the switchboard, which was hooked into a few cables chopped up in the ruins. Michel, who is good with his hands, happened to run across a telephone engineer. They went to work and after four or five hours cranked the handle and connected with a Yugoslav relay station.

"Give me Paris . . . Balzac 14.00," said Leblanc.

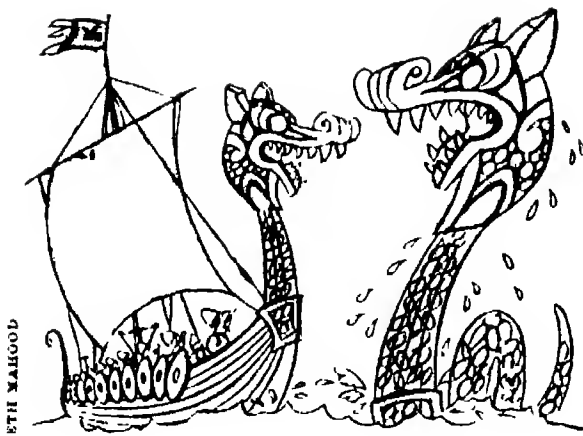
"Just a moment," came the voice at the other end.

The reporter waited, sitting on a heap of rubble with his tape recorder on his lap and the wire hooked into a pile of stones. Suddenly a flap on the board began to waggle. "Paris here."

A miracle. Leblanc grabbed the phone, "This is Michel Leblanc. Give me editorial, quick."

Into the receiver purred the voice of the switchboard operator, "Michel Leblanc? He is on assignment . . ." And she hung up.

—Christian Brincourt and Michel Leblanc, *Les Reporters* (Laffont)



Humour in Uniform

THE HIGHLY efficient sergeant in charge of administration at an RAF Signals Unit always insisted on stapling his own correspondence, and became annoyed if the WRAF did not keep his stapler filled.

Furious to find it empty one day, he began tapping it rhythmically to attract the WRAF's attention. Eventually she looked up, then said with a sweet smile, "Sorry, Sir—I'm not paid to read morse."

—The Rt. Hon. Sir Geoffrey de Freitas,
KCMG, MP

As a child I attended the army-run primary school in the British Zone of West Berlin. One day I came home from school and told my mother about a new song I had learnt. "It's called 'Green Grow the Russian Zone.'"

—N. J. Nell

ON our homeward journey after initial naval training in North Wales, we were joined by a seasoned rating, who was returning to his ship from leave.

The journey from Pwllheli had been extremely slow and tedious, and we

were all delighted when the train finally crawled into Crewe. Picking up his kit-bag, the rating remarked, "Well, that's the worst part of the journey over." "Where are you off to?" I asked. He grinned. "Hong Kong."

—A. J. Winter

DURING pilot training, I took a course on weather. One hot summer day, the instructor was discussing thunderstorms, rain showers and the development of ice crystals.

Turning to one day-dreaming officer, he asked, "Lieutenant Armstrong, could you tell the class what you think determines the size of the water droplets in a shower?" Hesitantly, the young officer said, "Well, Sir, I think it's determined mostly by the way you adjust the nozzle."

—Lieutenant W. T. Gilliam

SITTING in his office, the base commander was suddenly startled by the sound of a jeep. Looking out the window, he was enraged to discover two soldiers driving a jeep across the lawn of the headquarters building. Immediately, he turned to his *aide* and snapped, "Get me the names and numbers of those two men. I already know their new ranks!"

—David Parsons

NIGHT duty as a U.S. Air Force air-traffic controller often meant long lonely hours in the tower for my friend. But then one pilot took it upon himself to break the monotony. He would announce his plane's impending arrival by screaming into the microphone, "B Tower, guess who?" My friend put up with it for two nights, hoping that the pilot would tire of the game. But he didn't. On

the third night, when he called in, "B Tower, guess who?" my friend was ready. Turning off all the lights on the runways and tower, he shouted into his microphone, "B Tower, guess where!"

—Lou Siegal

IN THE Royal Navy those who wish to grow a "set" (beard and moustache), first ask their captain's permission to "cease shaving," then show him three weeks' growth. If the captain feels the set is not smart enough, he can order it to be shaved off.

A young officer of my acquaintance



presented himself to the captain after the customary three weeks. The captain looked at him closely and without a word wrote "St. Matthew, chapter 26, verse 41" on a piece of paper.

My friend rushed back to his cabin to look up the reference. It read: ". . . the spirit indeed is willing, but the flesh is weak." —Mrs. D. Elrington

SIGN in an army base office: "Lonely? Want to meet people? Want to be noticed? Do you like excitement? Then just leave that security file open tonight." —Dale Woodruff

PASSES were hard to get when I was stationed at an RAF base in Blackpool, during the Second World War. So I

took "unofficial" leave a few times to visit my parents in London. Once, on my return to Blackpool railway station, I found, to my horror, that the ticket barriers were manned by MPs checking passes. There seemed no way out for me or for the other airmen who were seeking some means of escape.

Then an officer got off the train. Seeing what was happening at the barrier, he shouted, "Fall in!" A few of us "fell in" and, with the rest soon following suit, the officer marched us through the barrier, where an MP saluted. Half-way to camp, the officer shouted, "Fall out!" and, turning to us said, "Thanks a lot, lads. We were all in the same boat." —P. M. G. Geary

ONE DAY shortly before my first baby's birth, I was hurrying along to meet my sergeant husband when I heard a low wolf whistle. I whirled around, expecting to see my husband, only to come face to face with two soldiers.

As their eyes took in my expanded waistline, they became flustered for a moment. Then, with a sheepish grin, one of them blurted out, "Sorry, we thought you were alone!" —Betty Wray

NOTICING during dawn action stations that all his sailors grabbed the first oilskin they could find, a naval lieutenant ordered that all oilskins be clearly marked with the owner's name.

Next day in the half-light of dawn he noticed with pleasure that all the men on the gundeck had a word painted on their oilskins. But as the light grew stronger he realized it was the same word: "Mine." —D. Measor



Birth Control Vasectomy

BY EVAN McLEOD WYLIE

During the past ten years, India has taken a world lead in promoting this simple, safe and effective method of contraception—vasectomy

EVEN for the most determined, disciplined and well-informed couples, birth control by any of the current contraception methods is burdensome and carries with it an element of risk. Little wonder that, all over the world, interest is growing rapidly in the simplest and most reliable form of contraception, the male sterilization operation called vasectomy.

One father of four says, "My wife and I were having a child every year. We used contraception, but like almost everyone else we often failed to use it at the right time." For him, and for his wife, vasectomy is a "great emancipator that enhances one's pleasure by removing the fear of pregnancy."

Many other couples, however, are confused about the operation although it is actually quite uncomplicated, and is often performed under a local anaesthetic without going into hospital.

The tiny sperm cells that fertilize the female ovum to reproduce the human species are manufactured within the male testicles, and travel by two hollow, tube-like ducts called the vas deferens, to the prostate gland in the pelvic cavity [see "I Am John's Fertility Gland," RD, January 1971, and "I Am John's Prostate," May 1972]. There they mix with seminal fluid and are ejected from the penis during intercourse.

In the vasectomy, the surgeon snips out a small piece of each vas

deferens, usually about five or six millimetres, and ties the severed ends with surgical thread before burying them in surrounding tissue. This prevents sperm cells from travelling from the testicles to the prostate, thus rendering the seminal fluid spermless and incapable of bringing about conception. In essence, the procedure is only cutting a length of tubing and capping the ends.

To reach the twin vas deferens tubes, the surgeon normally need make only two 15-millimetre cuts in the skin of the upper scrotum. He can use a local anaesthetic and does not have to touch any vital organ, major blood-vessel, nerve trunk, bone or heavy layer of muscle. Nor are the other parts of the male reproductive system—testicles, penis or prostate—involved.

After the operation, there are no side effects related to urination, no impairment of any normal activity. While doctors recommend 24 to 48 hours of rest following the operation, some men return to work the next day. The only caution, really, is that it may take three or four months for the last lingering sperm cells to disappear, and contraceptive measures must be continued until laboratory tests confirm that no more sperm are present in the seminal fluid.

Vasectomy has no effect on sexual intercourse, because the male seminal fluid—the overwhelming portion of ejaculation—is 95 per cent manufactured in the seminal vesicles

and prostate, which are unaffected by the vasectomy. One might expect that the sperm cells, which can no longer leave the body, would cause swelling or discomfort. This does not happen. Sperm produced after the operation are simply re-absorbed harmlessly into the body.

Nor does the operation affect production of the male hormones responsible for such masculine characteristics as facial beard and deeper voice. These are manufactured in the tissue spaces of the testicles *between* the tubules and absorbed directly into the bloodstream. A man remains as virile as ever.

Few Regrets. Is there any danger that a man may feel psychologically injured or “castrated”? Extensive studies of men who have undergone vasectomies have uncovered few negative reactions and these generally in individuals who had psychological or sexual potency problems before the operation.

In a survey carried out in Britain of some 1,000 married men, less than one per cent of the men or their wives had any regrets about the operation; three out of four couples reported *improved* sex lives after vasectomy and more than half felt their marriages were more harmonious. In a separate U.S. survey, wives have reported approval of vasectomy, because it relieves them of the necessity of taking birth-control measures.

A common query about vasectomy is: can a man's fertility be

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restored? The answer is that reversal is occasionally possible, although reconnecting the tiny tubes is considerably more complex than severing them, and results cannot be guaranteed. Still in the research stage is a technique for making vasectomy temporary and reversible by surgically inserting removable silastic plugs in the vas deferens.

Obviously, sterilization via vasectomy should be undertaken only when a couple are certain about their decision not to have any more children.

For All Mankind. Proponents of voluntary sterilization point to the social benefit that vasectomy may

bring as a step towards population control. Ecologist Dr. Paul Ehrlich, author of *The Population Bomb*, sees vasectomy as an important key to human survival.

Already, it has proved a potent factor in introducing effective birth control in India, Japan and Pakistan. At the latest count, 10.8 million Indians had been sterilized, 73 per cent of them men, and here vasectomy is considered the most effective population-control measure.

States Dr. Sripati Chandrasekhar, former Minister of State for Family Planning in India, "Voluntary sterilization will be the physical salvation of mankind."

Reaping the Harvest

It is possible for anyone to enjoy so many interests that the vexations of daily life come to seem trivial. Interests can be as varied as the stars in the sky. Ask a man, "What do you really like?" and he will answer differently every year and yet be telling the truth every time. Our interests change, requiring new data and new fuel. We need to rotate our minds as a farmer rotates his crops to get a better yield. —*The Royal Bank of Canada Monthly Letter*

FROM my study I look over a field. I know the farmer who owns and cultivates this field but before him many, many others have lived on this land. Very likely it was cultivated 4,000 years ago. If all the farmers who have lived on this spot through all those years were to come and see the present proprietor, he would not be able to house them—they would number between 100 and 150. Many of them would not understand a word of what the others were saying—the language has changed that much in the course of time. But suppose they lined up, starting with the first farmer, proceeding to the second one and so on, then the conversation could be carried on along the row. Then they could tell stories from one end of the row to the other, and you would hear a ripple of mirth go slowly down the line, as the story wandered from man to man through the centuries.

—Martin Hansen, *From the People's Danish History* (Gyldendal)

THE DISCUSSION on allegations of police racialism was one of the stormiest the BBC had ever televised. On one side were vehement civil rights leaders, emotional civil libertarians and articulate lawyers. On the other, a team led by a craggy-featured policeman of indestructibly even temper—Robert Mark, then Deputy Commissioner of the Metropolitan Police. With devastating logic, he quietly demolished every one of the wilder accusations levelled at his force.

Feelings were still running high when the programme ended—25 minutes late—but afterwards, Mark sought out Jeff Crawford, a West Indian civil rights worker who had led the attack. For half an hour, the two men chatted frankly about the problems of coloured people. Crawford later observed, “Mark is one of the most enlightened and far-seeing policemen Britain has ever produced.”

Last April, this 55-year-old Mancunian took over Britain’s toughest police job as the new Commissioner of London’s Metropolitan Police. From an eighth-floor office in the 20-storey, glass-and-concrete mass of New Scotland Yard, he commands a force of 23,600—almost a quarter of the police strength of England and Wales.

His “beat” covers some 207,000

*Commissioner Robert Mark
and the arms of his Force, London’s
Metropolitan Police*

Robert Mark of Scotland Yard

By DAVID MOLLER

Britain’s new top policeman is a tough campaigner who aims to put the professional criminal out of business



hectares of a city where violent crime has soared in the last three years, where Rs. 38 crores in cash and property is stolen each year. At the request of police forces in Britain and the Commonwealth, he dispatches murder, fraud, stolen art and other specialist squads to help on difficult cases.

Few men have been better qualified for this challenging post. Mark's 30 years in the service have given him vast practical knowledge of every field of police work; yet he remains the antithesis of the traditionally aloof, tight-lipped police chief. An eager and persuasive talker, a voracious reader of history, criminology and penology, a tireless writer and lecturer, Mark has spent much of his career happily breaking down the barriers that separate public and police.

Says Lord Hunt, chairman of the Parole Board, "Mark has a rare combination of qualities—a thirst for action, a visionary awareness of the changing demands of the job and the courage to persuade others of the need for change."

Mark's major head-on collision with traditional thinking came in the early 1960s when, as Chief Constable of Leicester, he mounted an all-out attack on the English system of criminal justice "for its failure to deal with a hard core of professional criminals."

At first glance, the system seemed to be working well from a police point of view. Roughly 85 per cent

of those tried at assizes and quarter sessions were convicted. But Mark revealed that almost two out of five of *those who fought the prosecution all the way* were acquitted.

"Dedicated criminals," he explained, "are getting off scot-free by exploiting legal safeguards originally devised to protect the innocent from capital punishment." With the abolition of hanging—which he wholeheartedly supported, as the vital first step to other criminal law reforms—Mark argued that it was "absurd that the accused or suspected person should still be able to play an entirely negative part in investigation and trial."

In a remarkable series of newspaper and magazine articles, Mark spelt out the unfair advantages then enjoyed by the professional crook:

- He need not disclose his defence before his trial and can thus suddenly produce "witnesses" to support an alibi that could have been proved false had it been known in advance.

- He was protected by the requirement for a unanimous jury verdict, which put justice at the mercy of the intelligence or integrity of a single juror.

- He must be cautioned by the police against self-incrimination—a safeguard unnecessary to the innocent but of inestimable value to the guilty.

- He need not enter the witness box—so avoiding cross-examination—yet the prosecution is not even

allowed to comment on that fact to the jury.

"The criminal trial today," concluded Mark, "is more a test of gamesmanship, eloquence and self-control than of innocence or guilt."

Mark persisted against the initial storm of criticism from judges, lawyers and civil libertarians and in 1967 Parliament adopted the first two reform proposals: the pre-trial disclosure of defence alibis and majority verdicts by juries. Now, the Criminal Law Revision Committee whose report is expected shortly, seems likely to recommend adoption of the remaining suggestions: the abolition of the police caution against self-incrimination and the requirement of the accused to enter the witness box.

Says Nigel Walker, one of Britain's leading criminologists and Professor-elect of Criminology at Cambridge, "Robert Mark has made an outstanding contribution in persuading the country of the need to take a very critical look at its criminal procedure, so that we can wage a far more effective war against professional criminals — without endangering the innocent."

Mark has always been a leader. His effortless authority promoted him to head boy at William Hulme's Grammar School in Manchester, where he was captain of rugby, vice-captain of lacrosse and band sergeant in the cadet corps. He also shot and played cricket for the

school, sang in the choir, played clarinet in the orchestra, wrote for the school magazine and acted in plays. One of his star roles was Police Sergeant Street in "Emil and the Detectives."

Attracted by the challenge of a tough, vital job, Mark joined the police. For nearly two years he pounded one of Manchester's roughest beats. Breaking up street fights and pub brawls was an almost nightly exercise.

Mark quickly displayed a flair for all types of police work. He spent six months as a plain-clothes officer, investigating street betting, gambling dives, sleazy nightclubs, brothels. Transferred to the CID, he helped clear up major robberies and sophisticated frauds. Posted to the Special Branch, he got a taste of counter-security work.

In Mitigation. But despite this crash course in every type of human vice and crime, Mark never lost his compassion for the weaker or unluckier ones enmeshed by the law. "Although Bob Mark would spare no effort when investigating crime," recalls Dan Timpany, a former head of Manchester CID, "he was scrupulously fair. If there were mitigating circumstances, he always mentioned them in court."

During the war, Mark was called up into the Royal Armoured Corps. Determined not to miss any action, he transferred to the crack Phantom Regiment, whose highly mobile

members acted as front-line eyes and ears of the Allied commanders. Lieutenant Mark's six-man patrol was one of the first British units across the Rhine, was in the van of an attack north towards the Ruhr and was then transferred to southern Germany for the final Allied dash to the Czech border.

Demobbed with the rank of major, Mark cheerfully rejoined the Manchester Police as a constable. Within three months he was promoted to Detective Sergeant.

Spot On. One of his shrewdest strokes as a detective came after he arrested Marian Kaczmarek, a Pole suspected of spying at a U.S. Air Force base. Although Mark failed initially to get a confession, his detective's instinct told him that the suspect wanted to come clean. Before Kaczmarek was locked up for the night, Mark had a desk, pen, ink and paper placed in his cell.

The following morning, Mark was handed a full, 13-page confession. "Not even the most cynical defence counsel could have accused me of 'helping' to produce such an incriminating document. It was written in Polish."

During the next seven years, Mark rose at a meteoric pace to Chief Superintendent and was not yet 40 when appointed Chief Constable of Leicester.

A tough but tolerant police chief, he went out of his way to explain the *reasons* for his actions. "In a free society," he says, "the effectiveness

of a police force largely depends on its acceptability to law-abiding citizens."

Whenever tensions in the city suggested that it might be wise to cancel certain public meetings, Mark would argue, "Even extremists have the right to free speech. It's up to the police to control public order." His force always did—having spelt out the ground rules beforehand.

Mark handled student high spirits with the same delicate blend of firmness and understanding. Says Sir Fraser Noble, Vice-Chancellor of Leicester University, "He was no killjoy. He let students know exactly what they were and were not allowed to do—and *why*—and therefore won their support and co-operation."

His greatest public relations challenge came when he persuaded the local traffic committee to cancel an order for 390 parking meters and adopt his own revolutionary scheme; limited but free street parking controlled by traffic wardens with powers to impose Rs. 38 penalties. Mark trained the first batch of traffic wardens himself—"Your prime responsibility is to help motorists. I will judge your efficiency not by the number of tickets you issue but by the absence of parked cars."

When the scheme got under way, he invited groups of citizens to police headquarters so that he could answer queries, hear complaints, learn better ways of controlling the

city's traffic. Soon police and local authority officials were coming from all over Britain and from other countries to learn from a city where traffic flowed smoothly, parking had been controlled, accidents reduced, the courts virtually cleared of parking cases—and a saving of over Rs. 14 lakhs a year had been made in police costs. Typically, Mark gave all credit to the city council. "They take the decisions; I merely offer advice."

Mark won the respect of his force by an almost fanatical integrity. He turned down invitations to lunches, dinners, film premières, football matches—even the opening of a bank—if he suspected the remotest possibility of pressure being applied at a later date. If he did attend a function, and was not speaking, he often insisted on paying for his ticket.

Turn of Fate. Mark might have stayed in Leicester indefinitely had it not been for the 1967 amalgamations under which his force was to be merged with Leicester and Rutland Constabulary. As the junior of two chief constables, he stood no chance of retaining command. But Roy Jenkins, then Home Secretary, admired Mark and had already singled him out for a key transfer to London's Scotland Yard.

Such a move was unprecedented. Though the Metropolitan Police often supplied chief constables and senior officers for other forces, no one had yet joined the "Met" at

assistant commissioner level. Many of Mark's new colleagues privately wondered what a man from a provincial force of fewer than 600 officers could possibly teach them. They soon found out.

Mark's outstanding abilities made him an almost automatic choice whenever a policeman was needed on a pressing commission of inquiry. He assisted Lord Mountbatten's probe into prison security and Lord Hunt's inquiry into the Ulster police, and was a member of the Standing Advisory Council on the Penai System.

Old and New. As Britain's top policeman, Mark earns Rs. 2.6 lakhs a year and has his own 17-hand horse, Richard, to ride on State occasions such as the Opening of Parliament. An official Rover whisks him to and from the Surrey home where he lives with his wife. (They have a grown-up son and daughter.)

He relaxes from the pressures of a 12-hour working day by listening to music, solving crossword puzzles—he can do those in *The Times* and *The Daily Telegraph* in under 45 minutes—and by reading a massive range of books. He reads few detective novels, however. "I know only too well that the policeman *doesn't* always get his man."

Mark has inherited formidable problems as the new Commissioner of the Metropolitan Police. He knows that his force still has to win the trust of the coloured community; London's 300,000 non-whites provide

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just 11 policemen. He would like far more effective measures to deal with parking offenders who now receive 1.3 million tickets each year. And he is determined to restore public confidence in the force which took a knock last March when a detective-inspector and a detective-sergeant were jailed for corruption.

Within a week Mark launched a massive reform programme, aimed chiefly at ending the CID's "private empire" status. London's 23 Divisional Commanders now directly control detectives working on their

"patches," and there will be far more interchange between the CID, uniform and traffic branches. Mark also set up a new round-the-clock department to speed investigation of the public's 3,500 annual complaints.

No one who has ever known or worked with Mark doubts his ability to succeed at New Scotland Yard. Says Lord Hunt, "Some of his solutions will probably cause opposition at first. They always have. But Robert Mark thrives on controversy—and he has an uncanny knack of being proved right."


Ways of the World

HONDA Motor Company Limited, a Japanese car manufacturer, says it has developed a device that automatically stops the engine of a car if an intoxicated driver sits at the wheel. The device, installed at the centre of the steering wheel, contains a special platinum which is sensitive to the breath, and sends an electronic signal to switch the engine off. The company is conducting further research, however, because of a hitch. The car won't start even if the intoxicated person is not the driver. —AP

By 1975, nine years ahead of Orwellian projections, every West German citizen may be officially known to his government by a 12-digit number. The Government explains that its voluminous registration system is being computerized, with the hope of eliminating the confusion that arises in a country where many people have the same surname (there are 300,000 Müllers alone in West Germany). Israel, Norway, Sweden and Denmark already have such systems, and others, including Japan, are preparing to follow suit. —Time

OFFICIALS in Iceland do not believe that harsh sentences deter crime. If a youngster is found guilty of petty theft or drunkenness, he is given a deferred sentence, what the Icelandic courts term a "suspended indictment" and placed under "social surveillance." Fifty per cent of the youngsters under suspended indictments never commit another crime. —Parade

The British Abroad

 F ALL cartoonists who have pictured British holiday-makers on the Continent, none had a shrewder eye than Pont, of *Punch*. He travelled France, Germany and Italy, observing his compatriots usually at railway stations, in trains, cafés and restaurants.

Bernard Hollowood, editor of *Punch* for ten years, sees Pont as "the last of a long line of comic artists stretching back to Hogarth."

Pont's real name was Graham

Laidler. Born in Newcastle-upon-Tyne in 1908, he began cartooning as a hobby, and adopted his pseudonym (short for "Pontifex Maximus," a family nickname earned as a result of a youthful surfeit of Roman ruins) in case his reputation as an architect suffered. However, ill-health forced him to give up architecture, so he concentrated on cartooning as a career.

When Pont died from polio at the age of only 32, some 450 of his



The British Character: Reserve

drawings had been published. None was finished in less than a day; each was carefully enriched by figures and backgrounds he had seen and either memorized or noted in his sketchbook.

His "British Character" pen and ink series is perhaps treasured most by his admirers. When it was first collected in book form, it became an instant best-seller and included some of these classic Pont observations of the British abroad.

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STREET, LONDON EC4Y 0HR



Love of keeping calm



Tendency to keep out of foreign politics



*Tendency to be embarrassed
by foreign currencies*



Skill at foreign languages



Absolute indispensability of bacon and eggs for breakfast



Attitude towards fresh air

BY RICHARD McBRIDE

He began as a big ungainly joke, a 'milk-cart nag.'
Yet in three short years Phar Lap became a legend



I WAS at Australia's Flemington race-course not long ago and watched a large black gelding come up from behind to win the Melbourne Cup by two lengths. The crowd roared, and my companion turned to me. "What a beauty!" he fairly shouted. "Was there ever a horse like him!"

There was, my friend, there was. Phar Lap was his name. In Australia's 160 years of horse-racing, there has never been his like.

In less than three years (1929-1932) Phar Lap won more stake money than had any horse in Australia, or in New Zealand where he was bred and raised. Punters worshipped him; in 40 races out of 41 he started favourite. "The Big Horse" or "Big Red" they called him. When he went to North America to race, MGM offered his owner a 100,000-dollar contract for a series of movie shorts. In a world made grey and weary by the Depression, Phar Lap was a name of glamour and excitement.

When he died suddenly in California in April 1932, the Press carried the news on the front page. His death sent a wave of shock and grief through Australia and New Zealand.

Phar Lap was an unlikely candidate for the status of national hero—a big, awkward, ill-proportioned horse, with none of the thoroughbred's traditional sleek lines. He was bought for the bargain price of Rs. 3,190 at the 1928

Trentham (New Zealand) yearling sale by an agent of Sydney horse trainer Harry Telford—who in turn was acting for David Davis, the American owner of a modest Sydney import business. It was a rough Tasman crossing, and the stable-boys were not impressed by the bedraggled horse that arrived in Sydney. In *Phar Lap: The Story of the Big Horse*, I. R. Carter records that they called him "a donkey, a throwback to a giraffe, a milk-cart nag, all bones, legs and head."

"Is this what you've bought me?" Davis demanded. "I don't want him. I wouldn't pay a penny to have him trained!" Telford therefore leased the horse for three years, shouldering all training and race-entry fees and food costs in return for two-thirds of the winnings. It proved to be a sound investment.

Phar Lap's lineage was as unimpressive as his appearance. His dam, Entreaty, had broken down after her first race. His sire was Night Raid, a humble plodder. At least one expert theorized that the Big Horse's real sire was the much more impressive stallion, Cymric, who had come out from England on the same boat as Night Raid. Somehow the two had been mixed up on the boat.

The origin of Phar Lap's name is equally uncertain. Apparently Telford got it from the Thai words for "sky wink," or lightning.

At first Phar Lap took poorly to

training. He was prone to colds and, like most thoroughbreds, was highly strung. Gradually, however, his confidence grew, his muscles firmed. Early in 1929, he was entered in the Nursery Handicap for two-year-olds at Rosehill in Sydney. Carrying the colours that were soon to be famous throughout Australia—red, white and black—the horse finished well back in a field of thirteen.

His next two races were no better. Then, in the six-furlong Maiden Juvenile Handicap, Phar Lap started at 7 to 1, having drawn the seemingly hopeless barrier position of 18 in a field of 21. He got off badly, and trailed hopelessly for four furlongs.

First Success. As the horses entered the straight, the race seemed all over, and the crowd began cheering a filly called Pure Tea. But Pure Tea began to tire. Phar Lap, his legs flailing the turf, came up. With less than a furlong to go, he shot ahead, and won by half a length.

After several more "also rans," Phar Lap came in fourth in the Warwick Stakes, then second in the Chelmsford Stakes against some of the finest horses of the day. Bookmakers began to look seriously at the big, awkward chestnut. And when he effortlessly won the Rosehill Guineas, there was no longer any doubt about his potential.

His first big challenge came on October 5, 1929, in the Australian

Jockey Club Derby at Randwick. Phar Lap started favourite. He galloped to a stunning three-and-a-half-length victory, setting a new record for the Derby.

For the Melbourne Cup on November 5, he started at the incredible price of evens. The huge crowd roared as Phar Lap led the field into the straight. But suddenly, unbelievably, the big chestnut fell back. He finished third. The crowd was bitterly disappointed. The experts were confounded. Phar Lap, it seemed, had been a freak.

But the experts were wrong. After a three-month rest, Phar Lap returned in 1930 to embark on the greatest succession of racing conquests Australia has ever seen. Race after race fell to the Big Horse. Eventually bookmakers refused to take bets on him.

But all was not oats and green grass. Three days before the 1930 Melbourne Cup, on the way back from the local track after a gallop, Phar Lap passed a car parked by the kerb in which two men sat reading newspapers. A moment later the engine started and, horn blaring, the car bore down on Phar Lap from behind. He reared in panic. A shotgun barrel emerged from the car window. There was an explosion. Fence and footpath were sprayed with pellets as the car pulled away.

Surprisingly, Phar Lap was unharmed. An armed party took turns in guarding the horse's box, but the

gunmen never reappeared. On Cup Day, the Big Horse finished a triumphant three lengths ahead of the field.

Trainers, jockeys and stablehands developed an unusual affection for this magnificent animal. A horse with a sense of humour, he suddenly would seize their hair or clothing between his teeth and pull. People, including thousands of non-racing fans, seemed to sense that they were watching the beginnings of a national legend. On whichever course Phar Lap appeared, a constant stream of admirers would visit his stall. And he seemed to respond.

"Nobody watching him step out to the starting gate—head high, muscles rippling—could doubt that the horse realized he was something pretty special," says his exerciser, Tom Woodcock.

Throughout his third racing season, the champion continued winning, taking eight races in a row between August and October 1931. (Earlier, he'd had nine wins in an unbroken sequence, and then fourteen.) The Melbourne Cup came round again. By now Australian handicappers were submitting the horse to enormous weights. This time he carried 68 kilograms, heaviest handicap in the race's history. He failed to get a place.

Early in 1932, Phar Lap was taken to North America, where he got an ecstatic welcome. "The Anzac antelope," U.S. racing

writers called him, "the Aussie kangaroo, the big train from the Antipodes." But a few predicted that, however great this champion might be in his own part of the world, he would now find himself up against sterner competition.

In March Phar Lap entered the prestigious Rs. 3.5 lakh Agua Caliente Handicap, then the richest race in the world. Result: he eclipsed the track record by one-fifth of a second! The world's Press trumpeted the news, and U.S. thoroughbred authority Don Fair called Phar Lap "amazing, the greatest thoroughbred of them all."

The Finish. Two days after his Agua Caliente win, Phar Lap was taken to a private training farm near San Francisco. There, on the afternoon of April 4, Tom Woodcock gave him his last feed for the day—Australian wheat bran, New Zealand oats and chaff—and that night brought him his usual lump of sugar. First thing next morning the trainer looked in on the horse with another piece of sugar, but Phar Lap wouldn't take it. He looked sick and drooping. His vet, William Nielson, found the horse's temperature was up and his belly distended.

It was soon clear that the chestnut was in agony. Nielson gave him a morphia injection, then sought another vet. When they returned, Phar Lap was rolling and staggering on the training track, whinnying with pain. He fell.

Blood gushed from his mouth on to Woodcock's clothes. The trainer threw himself on the horse's body and wept unrestrainedly.

PHAR LAP DEAD! ran the headlines in Australia. That same day, the papers announced that the government had won a High Court case supporting the supremacy of the federal government over New South Wales in financial matters. "But what is the use of winning a High Court decision and losing Phar Lap?" said Prime Minister Joseph Lyons. Solemn music came over the radio. Here and there flags flew at half-mast.

Robbed of the pleasure of seeing their idol make a clean sweep in America, many Australians were prepared to accept the view that the horse's feed had been poisoned by a racing gang. There were other theories—for example, about pastures fermented by moist fogs drifting in from San Francisco Bay.

However, an autopsy showed definite traces of arsenic in Phar Lap's body. On March 31, five days before the fatality, a "tree surgeon" had sprayed trees on the western boundary of the California

ranch with a lead-arsenate pesticide. The consensus, after the hysteria subsided, was that this spray, carried by the wind, had coated the ground where Phar Lap grazed.

To this day the Big Horse remains a national hero. His skeleton is on display at the Dominion Museum in Wellington. His huge heart, more than twice the ordinary size, awaits visitors at the Australian Institute of Anatomy in Canberra. And his stuffed body draws daily crowds to the National Museum of Victoria in Melbourne. There in a large hall the chestnut waits, noble of eye, snaffle bit in mouth, black and white reins resting on his magnificent neck.

For years, on the anniversary of his death, a wreath would appear mysteriously at the paddock entrance at Randwick race-course. "In Memory of Phar Lap," went the unsigned inscription.

Who put it there? No one can say, but it would always be there by dawn. I wager it will be there next April 5—and perhaps every year after, for as long as there is Randwick and an Australian who is fond of horses.

Bright and Brief

A SAMPLE of offbeat graffiti: "Is there intelligent life on earth?" Under this someone had added a postscript: "Yes, but I'm only visiting."

—T. M., quoted by Herb Caen in *San Francisco Chronicle*

UNDERNEATH the day's chart, which showed the atmosphere in New York City as being "unhealthful," was appended this reassuring footnote from the Department of Air Resources: "Today's pollution levels are expected to improve to unsatisfactory."

—Robert Sylvester, *Chicago Tribune*

Roald Amundsen

By land, sea and air

By land, sea and air he blazed
trails for all mankind

By EMILY AND OLA D'AULAIRE

THE MIDNIGHT sun glowed that January night in 1912 as five men crept into a small wooden hut. Inside, the only sound was the even breathing that came from bunks lining the walls. But as the newcomers began to undress, the sleeping men awoke and gaped as if they were seeing ghosts. One whispered: "Have you been there?" The tallest newcomer slowly looked from man to man. "Yes," he said, "we have been there."

In an instant the hut was a turmoil of shouting, laughing, leaping, hugging. For the one who had spoken was Roald Amundsen, called by many the greatest Polar explorer of all time. And "there" was the bottom of the world, an inhospitable circle of eternal ice and snow, never before visited by man, the South Pole. (The British party led by Captain Robert Falcon Scott had been beaten by more than a month.)

Roald Amundsen was then 39 and

at the pinnacle of a spectacular career. He had been the first to navigate the treacherous North-West Passage; was to become the first to fly over the North Polar Basin from Europe to North America. His unbelievable successes where so many others had failed were due to meticulous planning and preparation and to extraordinary physical endurance. Said Arctic explorer Fridtjof Nansen of Amundsen's conquest of the South Pole: "It was a triumph of Man over Nature, a victory of the human body and mind."

Amundsen was a born leader who commanded a fierce, abiding loyalty. He was always in superb physical condition. His weather-beaten face aged early, but his eyes sparkled with blue fire and his hawk-like nose bespoke firm resolution. An expedition member once said what many others secretly felt: "If we were in want of food and he said one of us must sacrifice himself for the others,



Victory for Norway: Amundsen at the South Pole, December 14, 1911

I would gladly go quietly out in a snowdrift and die for him.”

This remarkable man was born at Borge, near Sarpsborg, Norway, on July 16, 1872. His family were ship-owners and young Roald was surrounded by stories of distant lands and the sea. At 15, he read of British explorer Sir John Franklin’s attempt to negotiate the North-West Passage, the ice-choked, dangerous waterways that lie among the islands between Canada and the North Pole. Franklin and his 129 men died of starvation and cold. “Strangely, the thing that appealed to me most,”

wrote Amundsen, “was the suffering Sir John and his men had endured and I secretly vowed to become an Arctic explorer.”

Six years later, after two years at the Oslo University medical school, Roald signed on as ordinary seaman aboard an Arctic-bound sealing schooner. He quickly mastered seafaring ways and at 25 was chosen by the Belgian Antarctic Expedition as first mate aboard its ship *Belgica*. The ship was icebound in the Antarctic for 13 months, its crew the first to weather the winter there.

This experience whetted Amundsen’s Polar appetite. Once home, he began plans for an expedition of his own: an assault on the North-West Passage. He studied everything published on earlier attempts to force the straits. He observed the manners, dress and eating habits of the Laplanders to discover how they survived the cold. He learned to handle dog teams and became an expert on cross-country skis.

Finally, he bought an old herring sloop, a solid vessel, 21 metres long, named *Gjøa*, which he carefully stocked for the trip. Dried meat for five years and scientific gear for magnetic and meteorological measurements, for instance, went into special packing cases which could double as building blocks for the winter land base. He chose a small crew, six men, since it would be easier to feed them if they were stranded.

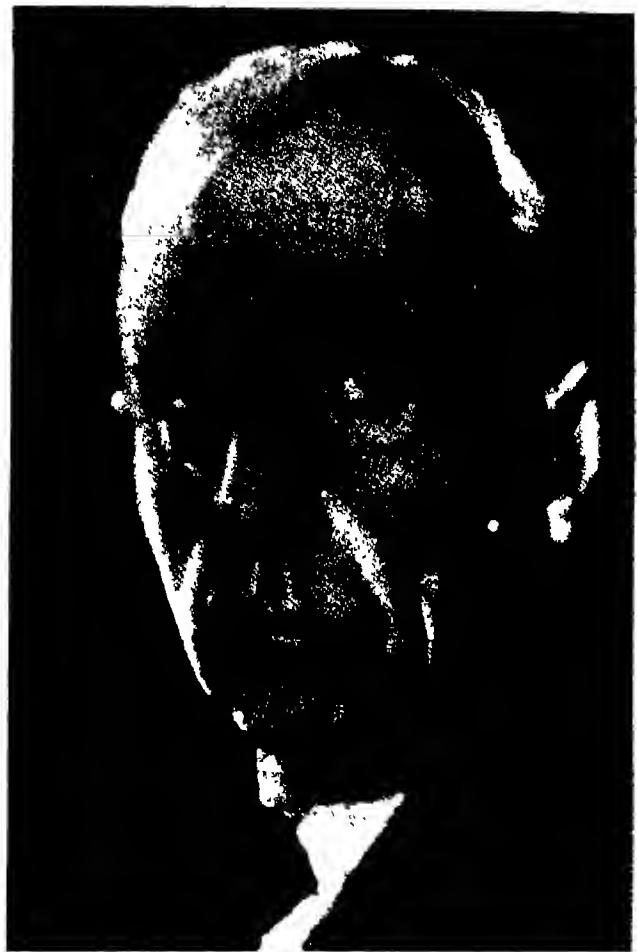
Ironically, it was this painstaking

preparation that almost wrecked the expedition. Because Amundsen had little cash of his own—finances plagued him throughout his career—he owed money for most of his equipment. On June 16, 1903, his creditors marched to the wharf demanding he settle his debts within 24 hours or they would confiscate ship and supplies. Amundsen knew he couldn't raise the money in time, so that night he silently set sail.

Previous explorers had mostly followed a northerly course, in Lancaster Sound in the Northwest Territories of Canada, so Amundsen headed due south. By the time the Arctic winter arrived and pack ice was closing in, *Gjøa* had penetrated farther than any ship before her. They put ashore at King William Island, a desolate, moss-covered land off the Canadian coast and built their packing-case houses.

Their vessel remained immobilized in the ice for two winters, but Amundsen and his crew kept busy. They hunted caribou for food, befriended local Eskimo tribes and gathered enough data on the drifting North Magnetic Pole to keep scientists busy for the next 20 years.

Then in August 1905, the thaw freed *Gjøa* and Amundsen steered her through the shallow waters skirting the shores of northern Canada; once they measured 2.5 cms. of water beneath the keel. Yet his decision to take the most southerly of all the routes proved correct. Two weeks after leaving King William



Amundsen aged 48 in 1920. During the new decade he would conquer from the air

Island, they sighted a ship in the west. Wrote Amundsen: "What a glorious sight. It meant the North-West Passage lay behind us."

His place in history was assured, yet he had another dream to fulfil. Back home, he raised money from lecture tours, repaid his creditors and prepared his next venture—to enter the Arctic pack ice north of Russia, and drift westward, with it across the roof of the world, hopefully over the North Pole itself.

Preparations were almost complete when, in September 1909, he received a hard blow: word came

that Robert Peary, the American explorer, had reached the North Pole. Outwardly calm, Amundsen went about his business. Privately, he conceived a sensational coup. If the North Pole was gone, why not make a dash for the South?*

His strategy was brilliant. On reaching Antarctica, he erected a pre-fabricated wooden hut ashore, three kilometres from the ship, and transferred men and supplies to it. Provisions were cached in three depots 160 kilometres apart on the Ross Ice Shelf, to be used on the last leg of the *return* trip from the Pole, when Amundsen and his men would be weary. Eight-kilometre-long lines of flags marked the location of the depots.

When spring arrived, Amundsen, with four men, 52 huskies and four laden sleds, began the 1,450-kilometre overland trek to the Pole. In a month they had reached the continental mountain range with its hidden crevasses and fragile snow bridges. From there it took four exhausting days to climb more than 3,000 metres to the Polar Plateau where they encountered a screaming blizzard. The men fought onwards.

Finally, at 3 p.m. on December 14, 1911, they reached the very bottom of the world. Said Amundsen of that moment: "Five weather-beaten, frost-bitten fists grasped the flagpole and raised it high in the air

* First news of Amundsen's change of plans reached Captain Scott in Australia en route to Antarctica. Scott's party got to the South Pole on January 18, 1912, only to find the Norwegians had got there before them.

to plant it as the first at the South Pole." The Norwegian flag fluttered proudly.

Amundsen's career, though crowned, was far from ended. The North kept calling. With a new ship, *Maud*, for four years he tried in vain to enter drifting Polar ice, first north of Siberia, then north of Alaska. He then realized that if he were to reach the North Pole, it would have to be by air. In 1914, he had become Norway's first licensed civil pilot. But where would he get the money?

In 1925, Lincoln Ellsworth, a wealthy young American explorer, provided enough cash to buy two German Dornier-Wal amphibians. Amundsen, now aged 53 and dubbed "The White Eagle" by the Press, together with Ellsworth and four crewmen, took off from Spitsbergen and headed north out over the Arctic Ocean. Hour after hour the two planes droned on. Then, 250 kilometres short of their goal, Amundsen's engines coughed and the plane splashed down on the icy sea. Ellsworth followed his comrade down but his aircraft was damaged beyond repair by the landing.

The six men hauled Amundsen's plane on to the ice and repaired the engine. There was too little open water to attempt a take-off, and where the sea was frozen it was too rough for a runway. So with only emergency food, three shovels, one axe and an ice anchor, they laboured for 25 days to carve out a usable

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strip some 500 metres long—a herculean task that entailed moving 500 tons of ice. Then all six men crowded into the Dornier which miraculously lifted off the icy track. Hours later, they landed off the coast of Spitsbergen. When the world heard about this spectacular feat, people began talking about “Amundsen luck.”

Although Amundsen had flown closer to the North Pole than anyone before him, he had not reached it. Besides, there was still an unclaimed first in Arctic exploration: to cross the Arctic Ocean, from Europe to America. So with Lincoln Ellsworth he bought a surplus Italian dirigible, hired as pilot the airship's designer, Umberto Nobile, and in May 1926 struck out once more from Spitsbergen. Amundsen's life-long dream came true as the huge airship floated over the North Pole. Then, 72 hours after leaving Spitsbergen he sighted Point Barrow, Alaska. He had done it: 5,457 kilometres, over the North Pole. “I consider my career as an explorer closed, Amundsen stated. “It has been granted for me to accomplish what I set out to do.”

But history had not yet done with Roald Amundsen. Two years later, Nobile, flying his airship *Italia*, crashed on the Polar ice, Amundsen, then 56 and aged beyond his years, volunteered to try and rescue his comrade. “I know

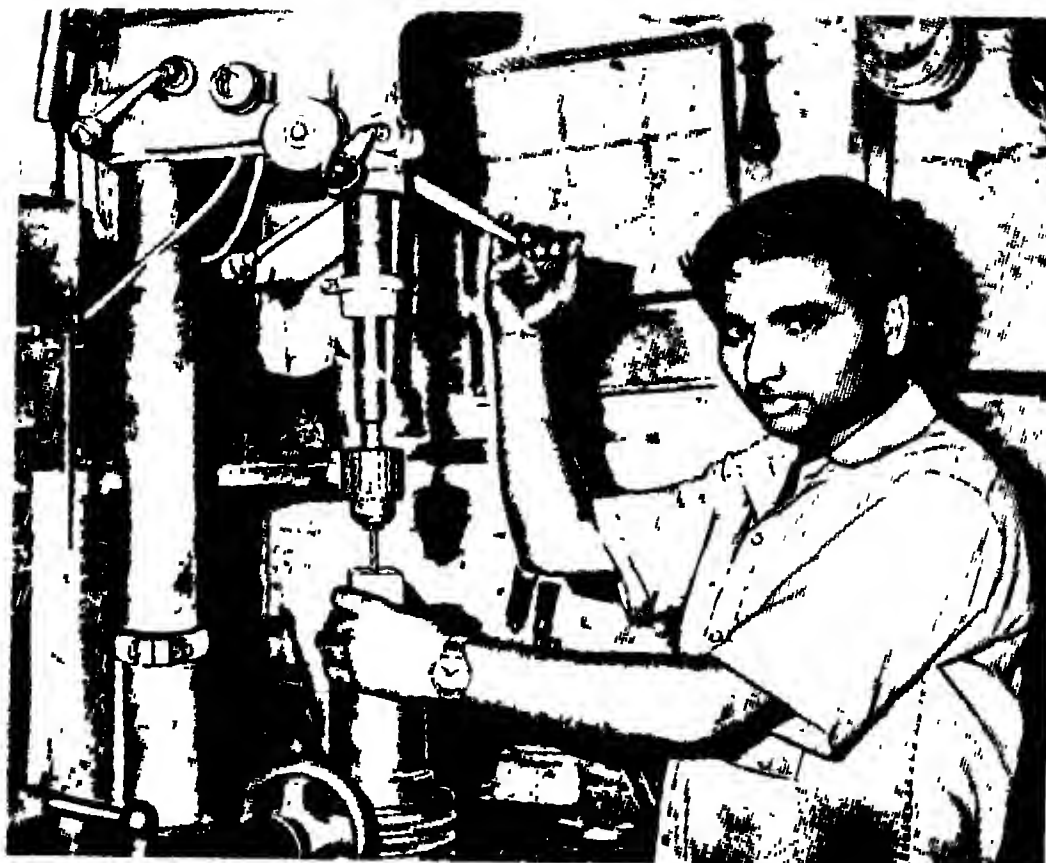
the area,” he said. “I will go. On June 18, 1928, The White Eagle took off on this mission of mercy. For three months the world clung to the faint hope that somehow, miraculously, this time too he would return—until a damaged float from his seaplane was found drifting north of Tramsø.

Today, 100 years after his birth, The White Eagle still casts a long shadow on the history of exploration. It wasn't until 1956 that man again set foot on the South Pole and lived to tell the tale. Not until 1969 did a commercial vessel penetrate the North-West Passage. As for Amundsen's air route from Europe to America over the North Pole, only now, in the jet age, has it become a highway for modern commercial aircraft.

A classic example of the unconquerable human spirit, Roald Amundsen was a man of tempered steel who quietly and firmly steered his chosen course, until he reached his destination. In the poetic language of the north, his friend Nansen said what so many felt after he was gone: “He found an unmarked grave under the quiet ice, but surely his name will long shimmer like our northern lights. He came to us, a blazing star that burst upon the darkened heavens. Then, suddenly, the star went out, and we are left, gazing sadly at the empty spot.”

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—Bill Vaughan



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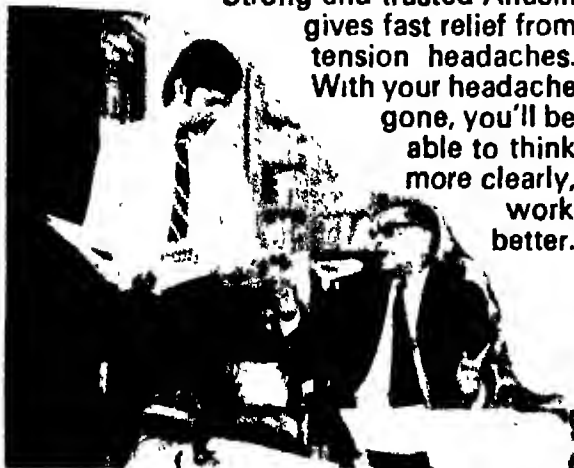
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Drug Threat From the Golden Triangle

BY CHARLES BONNAY

In an inaccessible region of South-East Asia, heroin is being manufactured on a vast scale and smuggled out to all parts of the world. Stopping this monstrous traffic has become a formidable challenge

NOT FAR from Saigon's Tan Son Nhut air base, an American soldier strolls into a lane known as "Mom's Alley" and tells a loitering Vietnamese teenager that he wants some "scag." The boy pops into a near-by shack and comes out with a 2.5-centimetre-long plastic vial which he hands the soldier for the equivalent of about Rs. 19. Inside the vial is a quarter of a gramme of heroin—96-per-cent pure.

In Honolulu, an alert customs

inspector spots a suspicious parcel on its way from Bangkok, Thailand, to a man in Chicago. It turns out to contain a leopard skin—with nearly a kilogram of pure heroin concealed inside the head. Another four kilograms of the drug are found in an already-cleared shipment of skins.

These incidents are symptoms of a new development in the international drug trade: heroin pouring out of South-East Asia. The drug has already flooded South Vietnam, and substantial quantities are now turning up elsewhere.

For years, much of Turkey's legal opium crop was diverted to clandestine laboratories in the south of France, converted into heroin and

PHOTOGRAPHER and journalist Charles Bonnay, spent a total of seven years in South-East Asia, first as a French soldier and later working for *Life* magazine. Last year, he went to Thailand, Laos, Burma and Vietnam to investigate drug problems.

then smuggled into America. Turkey has now agreed to halt all opium growing after this year. But even if the ban is effective, warns John Parker, deputy chief of strategic intelligence at the U.S. Bureau of Narcotics and Dangerous Drugs (BNDD), it will make virtually no difference in heroin traffic—unless the flow from South-East Asia is also stopped.

No Man's Land. The opium heartland is the "golden triangle," 15.5 million hectares of jungle-clad mountains straddling the borders of N.E. Burma, northern Thailand and N.W. Laos. Practically uncontrolled by any of the three governments, it is a wild place inhabited by rugged hill tribes, irregular troops, organized insurgents, local warlords and large-scale smugglers. It grows at least 700 tons of raw opium a year and now supplies some 50 per cent of the world's heroin—a figure expected to zoom to 70 per cent in a few years.

The bulk of the opium is grown by hill tribes in the Shan State of Burma. They developed their own high-profit cash crop long ago: the poppy, planted in late summer and harvested in winter, from which raw opium is collected. The pungent opium gum has been their trading currency for generations. Half a kilo buys a pig, a kilo and a half a horse; or it can be bartered for salt, cloth and utensils.

Last summer, I visited this tri-border region with an American narcotics agent. We flew upstream

along the course of the muddy Mekong River. On our right I could see Laos, which forms the hub of the heroin traffic flowing south to the U.S. troops in Vietnam. On our left lay Thailand, where opium production was banned in 1958 but whose dissident northern hill tribes grow some 200 tons a year. Then Thailand gave way to Burma, which turns out as much as 350 tons of illicit opium annually. From the plane I could look into the Shan State, almost entirely ruled by insurgent groups, where some 60,000 farmers cultivate opium.

Who are the real overlords of this gigantic trade? Periodically, China and North Vietnam are accused of being the culprits. But the guilt actually lies with two other groups. One is the 6,000-man remnant of the Chinese Nationalist forces driven from China in 1949. These men have entrenched themselves in northern Burma and Thailand as freebooters living largely off the massive opium trade. Well-equipped and heavily-armed, they operate as middlemen and transporters, buying the opium from the hill tribes and reselling it, escorting big shipments, levying tolls on all opium that passes through their territories.

The second, and far more important, group is the extraordinary Chinese "Mafia" that now dominates the production side: the refinement of opium into heroin, its packaging and distribution. This syndicate is



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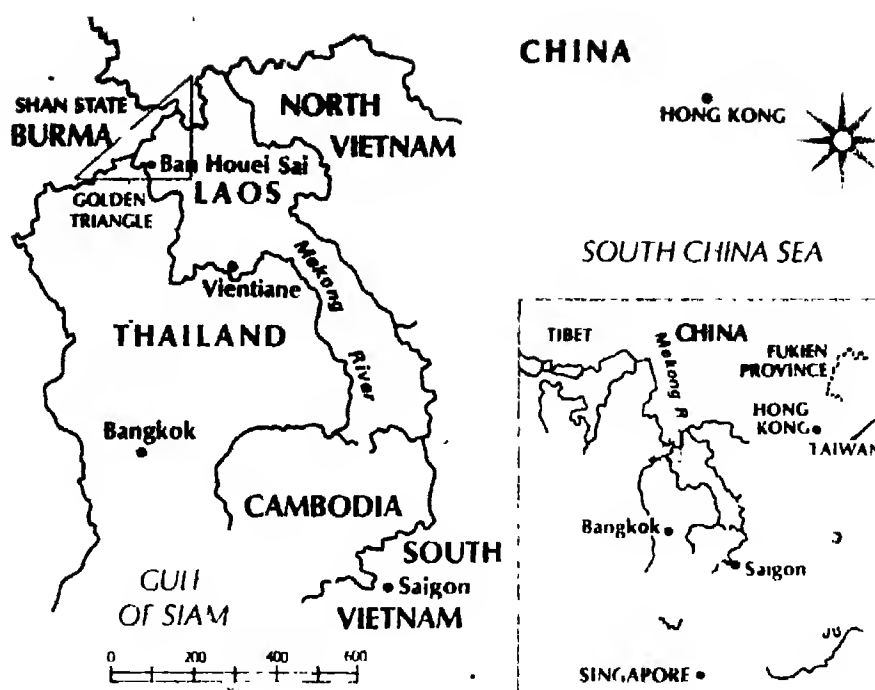
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composed mainly of a clan from China's Fukien Province, opposite Taiwan. Over the years, these people left their harsh, impoverished homeland and settled in family groups in the neighbouring countries, where they soon acquired a reputation as tough, sharp businessmen. Today these groups form

loose-knit network.

The centuries-old opium trade was mainly confined to supplying Asian opium addicts. But as heroin addiction increased in the U.S. during the 1960s, the dealers began to look enviously at the huge profits raked in by Western crime syndicates. When the U.S. military build-up brought hundreds of thousands of Americans to Vietnam, the Chinese Mafia knew they had a ready-made market at their doorstep.

Because of its bulk, its distinctive odour and the complicated ritual involved in smoking it, opium has never been widely used by Westerners. So, starting around 1965, the Chinese began to seek ways of turning it into a product easier to handle. They came up with "khai," a mixture of the residue of smoked opium, morphine base and aspirin that is



probably the most vicious drug in the world. Highly addictive and relatively cheap, it kills a regular user *within 12 to 18 months*.

I saw its terrifying ravages in Vientiane, the administrative capital of Laos, where shacks housing khai dens line a whole street. Inside the dim, filthy rooms, the scene was like a Nazi death camp: men who were little more than skeletons—mostly Asians, but also a number of Europeans—sat staring blankly into space. Every half-hour they roused themselves to buy another dose of the powdered drug, heat it over a candle in little tinfoil cups, then inhale the fumes through a rolled paper tube.

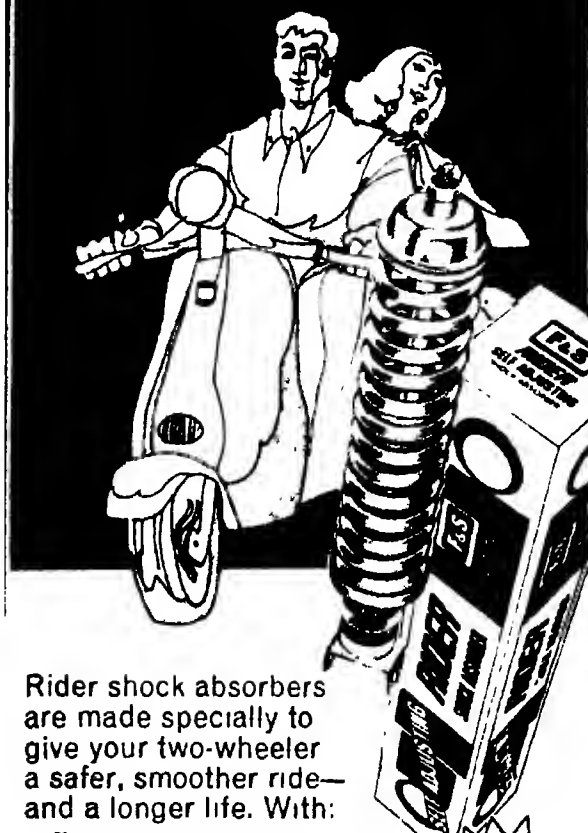
Khai's deadliness made it hard to sell to Westerners. For maximum profit, the obvious solution was to move into independent heroin production, by-passing the European

Safe!

RIDER

SHOCK ABSORBER

To make your two-wheeler a safer rider.



Rider shock absorbers are made specially to give your two-wheeler a safer, smoother ride—and a longer life. With:

- ★ Thick cylinders with mirror-like surface for smoother action.
- ★ Special components for greater resistance to impact, corrosion and high temperatures.
- ★ Polished hard-chrome plated piston rods for longer seal life.

original equipment on Raydoot, Bajaj (Vespa), Lambretta. That's why it makes the most dependable replacement.

Other brands in the range: MAGNUM, X-TRA DUTY and PREMIUM—all carrying the manufacturer's warranty.

Manufactured by:

Escorts Limited

Tractor & Engineering Division

18/4, Mathura Road, Faridabad (Haryana)

middlemen. But while boiling down opium into morphine base is fairly simple, refining the morphine base into heroin is much more technical: a lengthy process that requires experienced chemists.

The Chinese started in the autumn of 1967 by importing a few carefully selected, highly paid chemists from Hong Kong, Macao, Taiwan and Singapore to set up clandestine laboratories. The chemists stayed six to eight weeks, long enough to turn the previous winter's opium crop into heroin under the intensely curious eyes of their employers.

Increasing Production. Some of the local Chinese sent their sons to university to study chemistry. Within a few years, the Chinese Mafia knew enough about heroin refining to go into production for themselves. The results: an estimated 15 to 20 refineries that now nestle under the heavy jungle foliage of the tri-border region. Occasionally, if a laboratory has obviously been pinpointed by investigators, its owner may move to a safer spot. But most stay put, protected by private guards, remoteness, and bribes to local authorities.

Major McBee, a narcotics agent stationed in Vientiane, took me to the abandoned site of one such refinery in Laos—about three kilometres from the Mekong River town of Ban Houei Sai. Its Chinese owner had recently shifted it to neighbouring Thailand. Accompanied by the

1972

local police chief, we trudged along a narrow jungle path. A few months earlier, the police chief had been stopped here by a Laotian army detachment and bluntly ordered to stop snooping around.

Now, at a bend in the trail, we came on a blockhouse where Chinese sentinels once guarded the approaches. A short distance beyond, we arrived at the charred ruins of a village. All that remained of the lab were two 450-square-metre cement floors, some twisted metal pipes, a well and a waterworks. From the size of the installations, this had been a veritable heroin factory, capable of turning out several tons a year.

At first, these refineries produced mainly the low-grade purple smoking heroin (No. 3) used by Asian addicts. With a flair for salesmanship, dealers began to peddle the drug in brightly labelled packets bearing their brand names: Two Dragons, Golden Spider, Stag & Horse.

As demand among U.S. troops in South Vietnam grew, so did the market for high-grade white heroin. Willing to oblige, refinery owners switched to producing top-quality No. 4 heroin—96-per-cent pure. For the last two years, South Vietnam has been saturated with the stuff, in sophisticated packaging—small plastic vials, some transparent, others in colours. Stamped into the vial top is the grimly humorous label, "Healthy No. 4"—evidence that the heroin operators

New PREMIUM

SHOCK ABSORBER

**High only
on performance,
low only on price.**

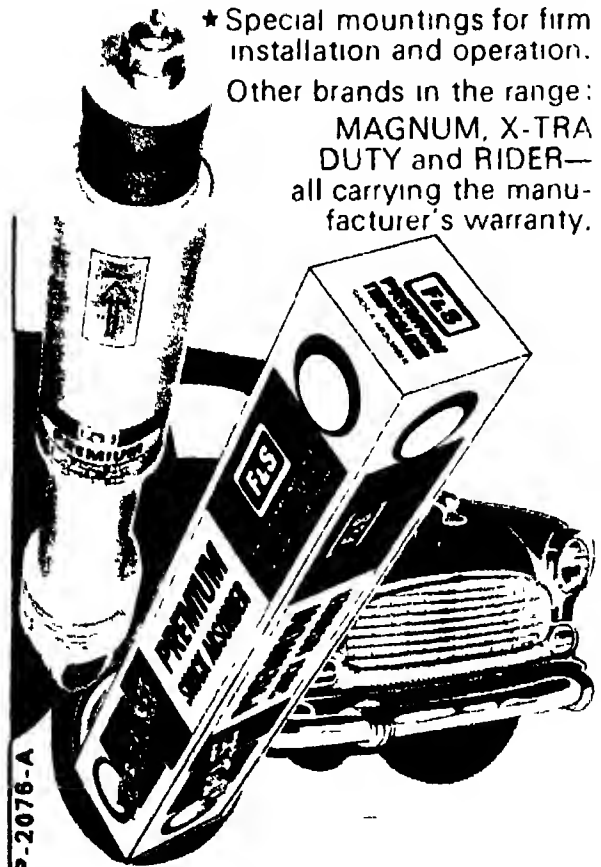
Premium is the shock absorber that gives top class performance at a remarkably low price. Additional features

- ★ Dampening values validated on Indian roads. Geared for better braking efficiency, firmer road grip, greater driving safety, also to ensure less wear and tear of vehicle chassis and tyres.

- ★ Cooling fins for top performance even in summer conditions.

- ★ Special mountings for firm installation and operation.

Other brands in the range:
MAGNUM, X-TRA
DUTY and RIDER—
all carrying the manufacturer's warranty.



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READER'S DIGEST

now have their own plastics factory.

The Chinese dealers spread the deadly powder throughout South-East Asia and overseas via three main networks. The first goes to Bangkok, Singapore and Hong Kong, and thence to Taiwan or directly to America. A second one moves overland to Saigon and eventually to ocean drops in the Gulf of Siam. Picked up, it continues to the U.S. east coast (via the Middle East and France), or west coast (through Hong Kong and Singapore). A third route runs directly to Taiwan and then to Vietnam and the United States.

Most of the heroin is transported by air—some of it in the military aircraft of local armed forces, some by small charter companies or private planes that can deliver to out-of-the-way airstrips. For ocean drops, 30-kilogram heroin packages are wrapped in five layers of plastic sheet, sealed inside a metal drum and parachuted into the sea. Marked by a signal buoy, they are easily spotted and picked up by boat.

As the heroin moves southwards to the coastal cities, the Chinese networks link up with a new group of dealers: European and American drifters, and ex-soldiers and deserters from the U.S. Army. These Western operators are channelling increasing amounts of heroin abroad.

A major entry point into South Vietnam for the heroin is Tan Son Nhut airport. In March 1971, a

prominent National Assembly deputy was caught there with about 4.5 kilograms of it; a week before, an Air Vietnam stewardess coming from Laos had been found to be carrying nine kilograms. Though the heroin entering the country is illegal, it is peddled openly. Even outside the cities, narcotics can easily be bought from stalls lining the main roads.

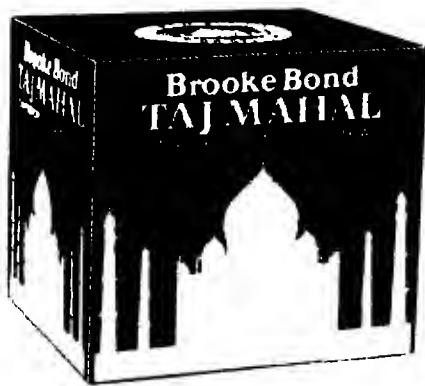
Innocent Victims. One reason for the explosive spread of addiction is the high quality of the heroin. In the United States, the drug retailed to addicts rarely contains more than six per cent heroin; it must be injected to produce any substantial effect. The 96-per-cent-pure heroin coming from the tri-border region can simply be smoked or sniffed, and those who use it under the illusion that it is non-addictive often learn the truth only when they are hopelessly hooked.

Why hasn't this monstrous traffic been smashed? The answer is complicated—an amalgam of historically permissive Oriental attitudes towards drugs; the economic necessities of the region; an entrenched corruption that pervades many Asian societies; the political and military realities of the war-torn Indo-China peninsula.

Although the situation is different in each country, Laos offers a good cross section of the problems involved. One July evening, I stood on the riverfront of Ban Houei Sai with Colonel Southone Sundara,

India's finest CTC tea
Brooke Bond
TAJ MAHAL

**Stronger liquor
plus superb taste
to give you
total tea
satisfaction**



CTC

The crush-tear-curl process
breaks each tea leaf into
smaller parts, ensures
perfect infusion, superb
colour and strength





DRUG THREAT FROM THE GOLDEN TRIANGLE

now chief of the Laotian Narcotics Brigade. Across the Mekong, in the gathering darkness, we could see the ferry coming towards us from the Thai bank of the river.

The Thai customs house closes at 6 p.m., but the ferry runs until 7 p.m. - and during that last hour more vehicles cross than during the whole rest of the day. The ferry docked, lorries rolled off on to Laotian soil, and the air was heavy with the unmistakable smell of opium. But since there was no anti-drug law in Laos at that time, Colonel Sundara could only watch helplessly as the amused Chinese lorry drivers rattled past.

Last September, as a result of strong American prodding, Laos finally passed a narcotics law that would in theory enable police to halt the opium traffic. How well it will be enforced is another matter.

"It is unfair to impose criminal penalties on the opium growers," an Interior Ministry inspector complained to me. "That's all they can grow in the mountains. America should let Laos set up a government opium monopoly, like the French had from 1899 to 1954, and

buy the whole opium crop from us."

American officials disagree that "that's all they can grow." In fact, the United States is standing ready to help convert the opium growers to other types of agriculture, and to consider buying up their crop during a transition period, as it is in Turkey. But unless a way can be found to by-pass Laos officialdom, most of the money would simply end up in the pockets of unscrupulous bureaucrats. Says McBee: "We might be willing to pay. But how much? And to whom?"

Recently, in northern Thailand and Laos, BNDD agents have begun working with special local enforcement units to interdict the opium and heroin traffic from the tri-border region. Unless these programmes are successful, the small but steady stream of Asian heroin now flowing to the United States and Europe will swell into a river of misery that will engulf hundreds of thousands of people.

Stopping the flow of heroin will constitute, in the words of a recent report, "one of the most formidable challenges to U.S. foreign policy in the coming decade."

Lofty View

I WAS in the lift in a large hotel, alone except for the attendant. As we proceeded towards my floor, I felt the need to say something. "Looks like another cloudy day," I said feebly. The impeccably groomed attendant made no response. I persisted, "Do you think there's a chance of rain?" Again, silence.

As the door opened at my floor, he said, "Sir, I will comment on anything of substance. But I do not discuss the whims of nature." Eugene Ward

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of watchmaking achievement,
Omega are offering
you the chance to
WIN THE WORLD!

**The world can be yours in this fabulous,
first-ever worldwide contest from Omega.**

**A trip for two to any part of the world!
999 other superb prizes!**

**Plus the chance to donate 100,000 Swiss Francs
to the humanitarian cause of your choice!**

*Below you will find some
of Omega's recent achievements.
Read them carefully, they contain
clues to the answers.*

**Omega Speedmaster - the
only watch worn on the moon.**

When NASA was looking for a watch capable of daring space, they took chronographs from leading brands and put them through the toughest tests man's ingenuity could devise. Temperature changes from -18°C to $+93^{\circ}\text{C}$. Plunges below the sea. Shattering acceleration followed by crash stops. Ultra-violet radiation. Days spent in vacuum chambers. The integrity and craftsmanship that is built into every Speedmaster made it the only watch to survive, the only watch to match the 99.9999% reliability factor of the Apollo spacecraft, the only watch to be issued as standard equipment for every American astronaut. In space the

Speedmaster went through even worse ordeals, including temperature changes of -100°C to $+100^{\circ}\text{C}$. The Speedmaster has been on the moon 5 times and has become, after 44 trips into space, a veteran astronaut.

**Omega chronometers
set world records.**

In 1952 Omega created the first of their famous chronometer family, the Constellation. Today, around two million chronometers have been made, and every single one earns not only the normal certificate from the Swiss Institutes for Chronometer Testing, but also the very highest commendation for "Especially Good Results". The 1972 Constellation is a superb amalgam of

modern technology and traditional skill. Omega used a computer to decide upon the chronometer's frequency for optimum accuracy, and created a completely new lubricant to cope with the problems created by a revolutionary high-speed movement. Then the craftsman took over, and created a case and bracelet of superb, hand-crafted beauty; a setting worthy of the miniature masterpiece within.

The most advanced electronic watches in the world.

Twenty years ago, at a time when the rest of the watch industry was virtually ignoring electronics, Omega created the Time Recorder; based on a quartz oscillator, it was a forerunner of the quartz watches of today. With this flying start, it is hardly surprising that Omega have created the most sophisticated electronic watches you can buy.

Omega's masterpiece is the record-breaking Megaquartz. The oscillator at the heart of the Megaquartz vibrates over two million times every second, giving the Megaquartz an accuracy of better than *one second per month*.

The second member of the family is the Electroquartz. Its timekeeper is made up of a quartz crystal vibrating 8,192 times per second, and an integrated circuit no larger than 2.14×1.89 mm. The Electroquartz is a miracle of micro-miniaturisation accurate to five seconds per month.

The most popular model in this remarkable range is the f300 chronometer. The f300 employs a sonar resonator much superior to ordinary tuning-forks, being counter-balanced to overcome the disturbing effects of gravity. It is also considerably more shock-resistant. The success of this system can be judged by the fact that in 1971 the f300 took 93% of all official Swiss awards to electronic chronometers.

Forty years of sports timekeeping.

Omega timed the Los Angeles Olympic

Games in 1932, and since then have been the official timer for 13 Olympic Games. This unrivalled service to sport has proved beneficial to both sides, since Omega have been able to perfect the art of electronic timekeeping in one of its most testing applications—the separation of contestants by fractions of a second.

The Omegascope, for example, was originally developed for sports timing, but has found a multitude of industrial uses; one of the most recent being its employment in checking the accuracy of the navigational computer on board the Concorde prototypes. The Swim-O-Matic, another sports timer, can separate contestants with an accuracy of $1/100,000$ th of a second.

A royal jeweller designs for Omega.

Omega have always believed in marrying the inward beauty of precision to an outward beauty of form; to find a new expression of this philosophy, they commissioned Andrew Grima, jeweller to Her Majesty Queen Elizabeth II, to design a new collection of jewellery watches. His creations have freed jewellery, and jewellery watches in particular, from their conventional bonds bringing them into line with the general trend of modern art.

Grima's "hallmark" is the daring use of massive precious and semi-precious stones in place of the usual "glass" of a watch; and these precious stones are then cut and shaped to add a unique persona to the timepiece.

The diver's watch that's tested in helium.

When the divers of Operation Janus lived and worked for eight days on the sea-bed below the Gulf of Ajaccio, they were equipped with the Seamaster 600, Omega's professional diver's watch. When Commander

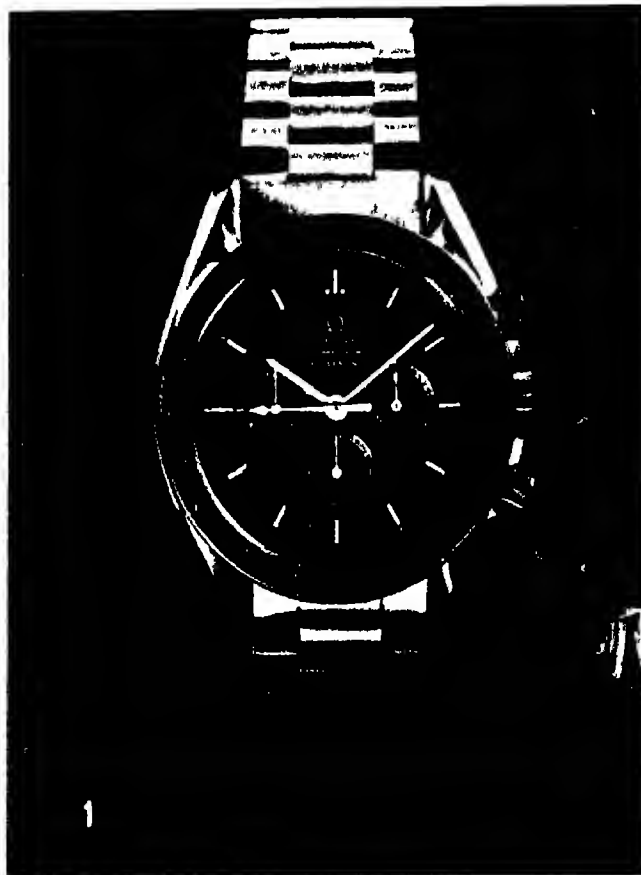


Cousteau needed a watch for his experiments in man's ability to work at depths of 1,500 ft, he also used the 600.

The Seamaster 600 is cut from one solid piece of steel, and has many features which make it water-resistant to more than 1,800 ft. But simply being resistant to water is not enough nowadays; more and more often, the professional diver works from a bathyscaph, breathing a mixture containing oxygen and helium. Unless his watch is designed especially to keep out these gases, it can fill with helium and, on reaching the surface, explode.

So Omega test the 600 in helium, and have managed to make it gas-proof to the extent that if one were to create a vacuum in a 600, it would take one thousand years for the air outside to get back in. That's the sort of reliability, the futuristic specifications, that is built into the watch the professional divers wear about their dangerous trade.

Ω
OMEGA



1 Ref ST 145 022 Omega Speedmaster Professional, the only watch worn on the moon Chronograph in stainless steel with centre stop second hand and hour and minute totalisers

2 Ref ST 196 005 Electroquartz Oscillates 8,192 times per second, accurate to five seconds per month. In stainless steel or gold, instant date change, integrated leather strap or bracelet

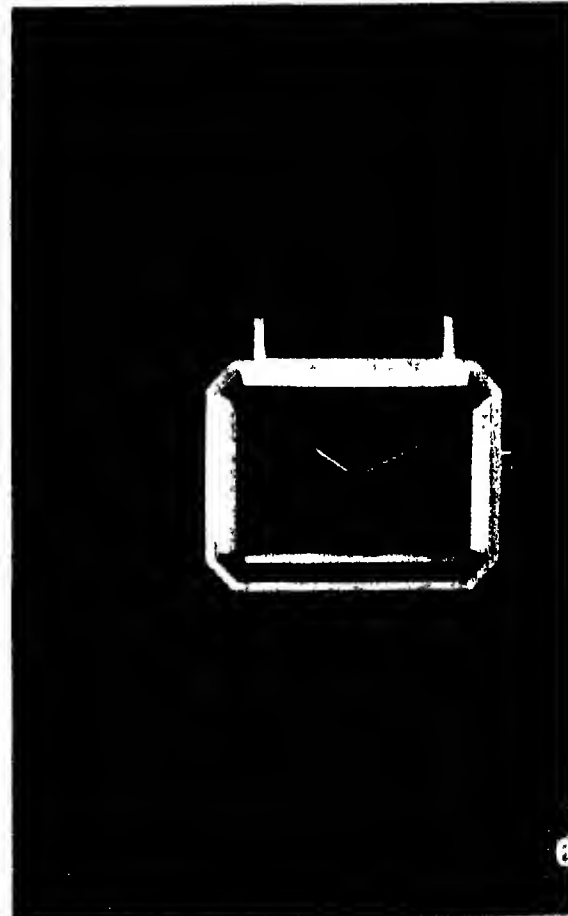
3 Ref BA 368 847 Constellation officially certified chronometer, in 18ct yellow gold, instant date change, high frequency movement, integrated bracelet. Also available in steel

4. Ref. ST 566.015 Dynamic, ladies' model Colour zones for fast reading, luminous dial, automatic, calendar, stainless steel Also available in gold and goldcap With instant-change bracelets.

5. Ref. ST 398.804 1300 electronic chronometer, officially certified, 93% of all official awards Employs a sonor resonator much superior to the ordinary tuning-fork movement (lic. Bulova pat. ESA). In stainless steel, with instant date change. Also available in gold.

6. Ref. MD 511.379 A jewellery model from the Omega "Emerald" collection. Gold-plated Raised, faceted, man-made sapphire crystal. Also available in gold.







Omega offer you the time of your life:
- a trip for two to any part of the world!
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by a royal jeweller!
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to be won!

AND the chance to donate SFr. 100,000
to the humanitarian cause of your choice.



First prize For the first prize in this first-ever worldwide contest, Omega offer a trip for two to any part of the world. You can follow the trade winds to the South Seas; take Marco Polo's enchanted route along the golden road to Samarkand, or trace Gauguin's bohemian path to the eternal Isle of Tahiti. Or you can take the opportunity to visit friends or relatives living overseas, people you may not have seen for years. In fact, you can go anywhere that SFr. 50,000 will take you, or you can accept the cash equivalent instead.

In addition, the first-prize winner will be entitled to choose a humanitarian cause to which Omega will donate SFr. 100,000 in the prizewinner's name, at a special ceremony held at Montreux, on the romantic Lake of Geneva.

Second prize Omega asked Andrew Grima, jeweller to Her Majesty Queen Elizabeth II, to design a watch for the second-prize winner. Grima will take a superbly accurate Omega movement, and build around it one of the voluptuous creations which have

won him world fame. The "glass" of the watch will be one of the chunky-cut precious stones which are Grima's hallmark, and the total creation will reflect, uniquely, the personality of the fortunate contestant.

48 third prizes 48 superb Omega Constellation selfwinding chronometers. In 18ct. yellow gold, with flat crystal glass, this is the world's slimmest selfwinding movement ever built into a man's chronometer. Incredibly accurate, and suavely elegant with its smoothly-flowing bracelet. An equivalent watch will reward women prizewinners.

950 other prizes 950 prestigious Omega watches to be won! For men, the same Speedmaster that went to the moon, engraved on the back "The Moon Watch", this is the chronograph worn, as standard issue, by every American astronaut to visit the moon. For women, the Dynamic, one of the most revolutionary Omega watches, designed for the functional life of today.

Questions (place a cross in box corresponding to correct answer)

1. Apollo

As the official watch of all American astronauts, the Omega Speed-master endured in space temperatures varying from .

-100°C to +106°C ☐

-140°C to +230°C ☐

-30°C to +80°C ☐

2. Chronometers

Omega are the largest manufacturer of chronometers. The total number of Omega chronometers produced is around

500,000 ☐

1,500,000 ☐

2,000,000 ☐

3. Electronic

The Omega Electro quartz is a masterpiece of technology, miniaturisation and precision. What size is the integrated circuit in this watch?

1.7 by 5.82mm ☐

6.1 by 0.2mm ☐

2.14 by 1.89mm ☐

4. Sports time-keeping

The Swim-O-Matic is the apparatus which allowed you to watch several Olympic swimming contests on television with simultaneous time indication. With what accuracy can the Swim-O-Matic separate contestants?

1/10th sec. ☐

1/100,000th sec ☐

1/1000th sec. ☐

5. Jewellery watches

For their new and avant garde range of jewellery watches, Omega commissioned a famous designer. His name is

Salvador Dali ☐

Luigi Vignando ☐

Andrew Grima ☐

6. Water-resistant watches

If a vacuum was created inside an Omega Seamaster 600, how long would it take for the air outside to get back in?

1 year ☐

1,000 years ☐

100 years ☐

Second part

OMEGA are proud to present some of their major achievements. Please arrange these achievements in order of importance; that is to say, in what you think is the

order of their contribution to the success of Omega. Put 1 in the box opposite what you consider to be the most important achievement, 2 against the next most important, and so on.

Jewellery watches ☐

Sports timekeeping ☐

Water resistant watches ☐

Apollo ☐

Electronic ☐

Chronometers ☐

Third part

In addition to the personal prize, Omega will donate, on behalf of the first-prize winner, the sum of SFr. 100,000 to a humanitarian cause of his or her choice. Please state here which cause you suggest and give—in not more than 15 words—the reasons which justify your choice.

If I win the First Prize, I should like Omega to donate SFr 100,000 on my behalf to

I would choose this because

Affix stamp here
All entries
without stamp
are invalid.

**Omega Worldwide Contest,
Post Bag No. 10002,
G.P.O.,
Bombay.
India**

(Write in block capitals please).

Surname **Age**

First names **Profession**

Street

Town **Country**

INDRD

10002

IT WAS utterly ridiculous, the plump redhead remarked during a typical Saturday-night suburban conversation—referring to the behaviour of a family next door who had lost their dog. Their house was just like a *morgue*. The kids all weepy and not eating, the mother going round damp-eyed and out-of-sorts, and the father ordering reward posters tacked up all over the county.

"It was *only* a lost dog," the redhead sighed. "The whole world coming unstuck, and they get themselves into a state over a lost *dog*!"

I wrote off the redhead, switched off the conversation and reached back just a few years. I hadn't thought about it for quite a while...

I was on a brief trip to London with six other journalists. In my hotel room the first night, at midnight, the phone rang. It was an overseas call: my wife from Long Island, New York. "Don't be alarmed," she began, "but it's Alex. He's... missing."

The word was euphemistically ominous. "What do you mean—*missing*?" I clutched the phone, shouting with an urgency that was trying to leap 5,500 kilometres.

"It happened yesterday," she said. "I took him to have that gashed tail of his looked at, as you suggested. The vet said it was infected and wanted Alex to stay overnight for treatment, so I left him. But you know how Alex hates the vet's. When somebody opened the door to

'Only a Lost Dog'

Alex was a friend,
a clown, the undisputed
owner of our house

By JEROME BRONDFIELD



the examination room, Alex leaped off the table and streaked out the front door just as someone came in. It was awful timing. The doors, I mean."

The vet and an assistant had toured the neighbourhood in their cars, asking everyone if they'd seen a big black Labrador retriever with a white bandage on his tail. Nothing. Alex had vanished.

But the big trouble was that the vet's surgery was kilometres from our home, and Alex had gone there in a car. He'd have no trail to back-track and find his way home.

She tried to reassure me. "Don't worry. Ellen has her whole class at school out looking for him. We'll find him!"

I was not impressed with this evidence of my daughter's social influence. And panic was gripping me. "If he isn't home tomorrow," I shouted, "I'm taking the first flight back!"

When I rang off I began to sort out what it all meant to me.

Life Style. We had got Alex as a three-month-old waif at a dogs' home. He was now a glossy, magnificent nine-year-old. Explaining his position in our family always drew an incredulous "You must be joking!" Suffice it that my wife and I had to buy a king-size bed because whenever Alex felt like vaulting up for part of the night, there wasn't much we could do about it. Or cared to. (Will that do for openers?)

He was a remarkable athlete. Small boys were awed by the sight of a rubber ball bouncing off our roof, with Alex tracking its downward arc and catching it in his mouth. He never missed. To legions of other children, Alex was the foot-pad who swiped any ball left unattended on a lawn. We had two shopping bags full. Every other day, a child would arrive to burrow through them for a ball with his initials on it, while Alex eyed the proceedings grudgingly.

On summer nights we'd go down to an ice-cream stand where I'd hold a dishful for Alex while he sat up and lapped it clean—the usual crowd of children staring with fascination.

He was known to neighbours as the "necklace kid." Attached to his chain collar were all the licence and rabies tags bought over the years. He must have had 16 of them dangling like charms and, on a still summer night when we'd let him out for his usual ten-o'clock romp by himself, we could hear through the open windows the musical jangling of his necklace a street away.

Every so often he'd be gone for hours and I'd start worrying. Many was the time I'd get out of bed at 2 a.m., start up the car and tour the entire area for him. I'd never find him. But (are you ready for this?) invariably I'd come back home and he'd be inside the dining-room, grinning out at me through the window. And always the sleepy

litany from my wife: "He came back five minutes after you left." I *know* it was deliberate on his part. He was for ever testing me.

Although I paid the mortgage, Alex owned the house. It is the absolute truth that when he climbed up on the sofa he'd first knock down a cushion so he could lay his head on it. It is also true that on his birthday my daughter Ellen would ceremoniously tie a gold damask napkin round his neck while he ate a special steak—at the table. Others thought us nuts. We thought it hilarious.

Rapturous Greeting. The truly wondrous thing was our intimate relationship. He'd go wild when I came home at night, grabbing my hand in his mouth, turning himself inside out in his joy, expressing all his exquisite love in his laughing face. In madder moments I'd get down and wrestle with him; a Tarzan scene complete with horrible growling. He loved it. I loved it. A stranger would have thought us in mortal combat. Well, I could go on, but who would believe me?

So now you can begin to suspect how I felt after receiving that transatlantic phone call from my wife. I was inconsolable. Devastated. It was a black, sleepless night.

In the morning I told some of my colleagues what had happened. I got a couple of polite "Too bads." A meeting with top government people at No. 10 Downing Street was a blank for me. So was the VIP

treatment we got in Fleet Street. That evening we attended the musical *Pickwick*. Zero. Afterwards we were to go on to dinner. But I begged to be excused—I just wasn't up to it.

When I returned to my hotel at 11 p.m. the desk clerk handed me a yellow envelope, a cablegram. I ripped it open and burst into tears. From the sheet of paper, two words leaped out: ALEX HOME.

That's all it said. It made no difference that the posh lobby of the hotel that night was filled with elegant ladies and their white-tie escorts. I dabbed at my streaming eyes and smiling crazily, thrust the cable at the clerk. "It's my dog," I said ecstatically. "Forgive me . . . Alex was lost. And now he's home again!"

I had to fly out into the night and work off my euphoria. In near-by exclusive Belgrave Square, I wanted to shout out the news that Alex was safe, but it would not have been quite proper among those elegant town houses. Instead I picked up a stick and rattled it, like a small boy, across long stretches of iron railings. I *did* that. Yes, I *did*.

Hair Raising. I slept the sleep of the blessed that night. But next day when I repeated my good fortune, one of the group said, "I certainly *hope* your dog is safe at home . . ." Then he stopped short.

His ominous message burst upon me with cold and agonizing clarity. Could the cablegram be simply a

READER'S DIGEST

protective hoax on my wife's part, so I wouldn't cut short my trip?

I ran to my room and savaged the phone. "You shouldn't have done it!" I cried when finally my wife came on. "That was cruel, cabling me Alex was home. Oh, I know you were trying to spare me the misery while I was here, but—thanks, but no thanks. It didn't work!"

She interrupted my tirade. "You're sweet. You're also goofy. Alex *is* home—in fact here he comes now."

I heard her calling him. Within seconds she was shaking his chain collar with its crazy multitude of licence and rabies tags—there was no other sound quite like it in the world. And then I heard him bark!

"*Now* do you believe?" my wife said. "He was trotting across a golf course near the vet's, when a groundsman saw his bandaged tail, checked his identity tag and phoned

me. I made the 11 kilometres in less than seven minutes and I think I went through two red lights. I gave that nice man 25 dollars. I thought you'd approve."

I approved. I hung up and flopped on my bed, exhausted.

Three days later my wife met me at the airport, Alex was on the back seat. He thumped his bandaged tail all over the place and grinned as I rushed to the car. I flung my arms round his big, furry neck. My wife shook her head, misty-eyed. "I guess no one would ever understand, would they?" she said.

ALEX DIED three years later of leukaemia. I made a lovely redwood and white-cement headstone for him under a huge willow in a corner of our garden. The inscription says:

ALEX
HE LOVED US
WE LOVED HIM

Cartoon Quips

CAR salesman to customer: "And under our extended credit plan the payments never become a burden. They merely become a habit." —Lichty

TYCOON shouting into telephone: "Did you hear what I said? I said, 'This is Harry Jones, and I'm too important to talk to a recording machine!'" —Tann in *Saturday Review*

UNSHAVEN man in vest to wife in curlers and dressing-gown: "Gladys, we've got to stop seeing each other like this."

—Hageman in *Weight Watchers Magazine*

GOLFER to companion: "George, you've got a real picture-book swing there. Too bad a few pages are missing." —Virgil Partch



THE KING AND THE MAIDS—an original painting by Satish Gujral. Copyright Modipon

THE KING AND THE MAIDS have chapters, nay volumes to illustrate their tales. They invoke a nostalgia that has few equals in human mythology. They attract us, for these are men and women who seek to live life in its fullest.

They wouldn't accept it in just black and white. They are possessed with vision that recognises each tone, each shade and can see millions of these in a single hue. It is this possession that helps them explore in life the possibilities that make each breath feel like a life span, full of pleasure and glee.

These men and women who sip from this fountain of youth to whom life means always something new, are one that Modipon seek to satisfy. But itself Modipon is never satisfied. It is always exploring new possibilities, new tones, new shades. Modipon is always seeking.



modipon
MAKES BETTER NYLON YARN

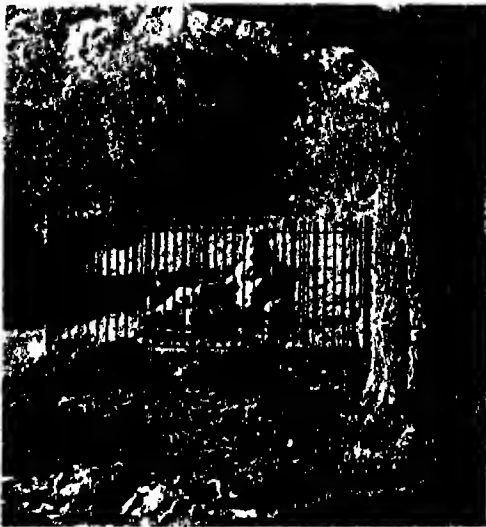
FATHER THAMES

River of History

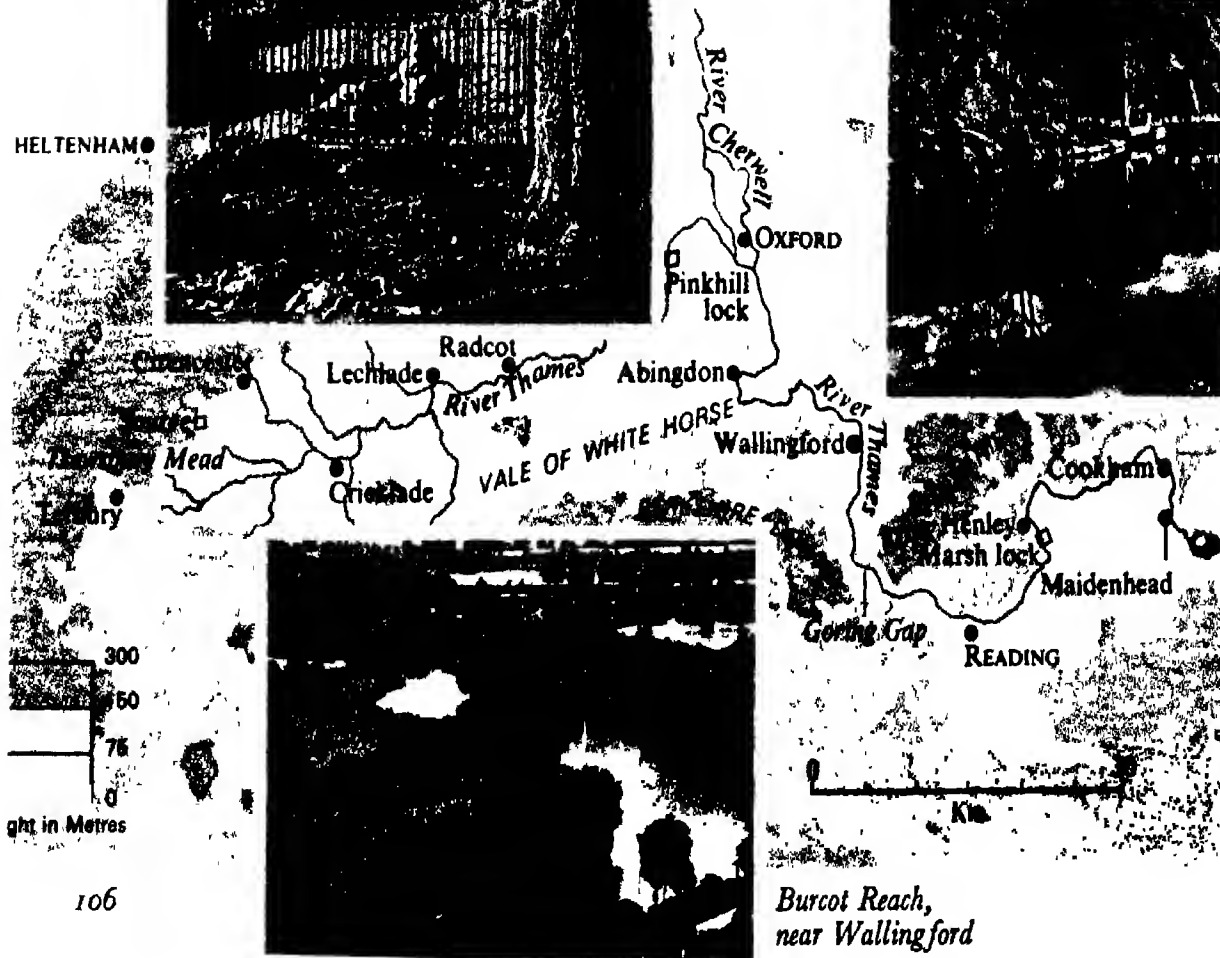
By PETER BROWNE

It flows across the heart of England, from a
country spring to the mighty sea

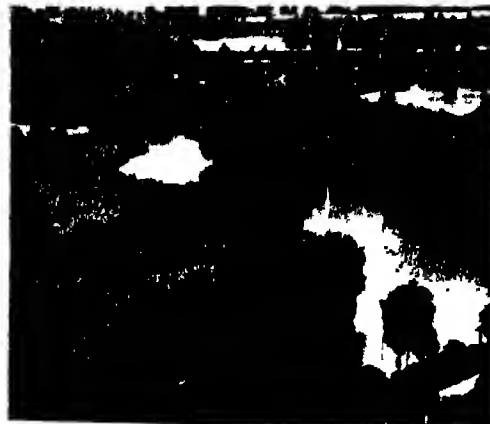
Trewsbury Mead



Cookham lock



*Burcot Reach,
near Wallingford*



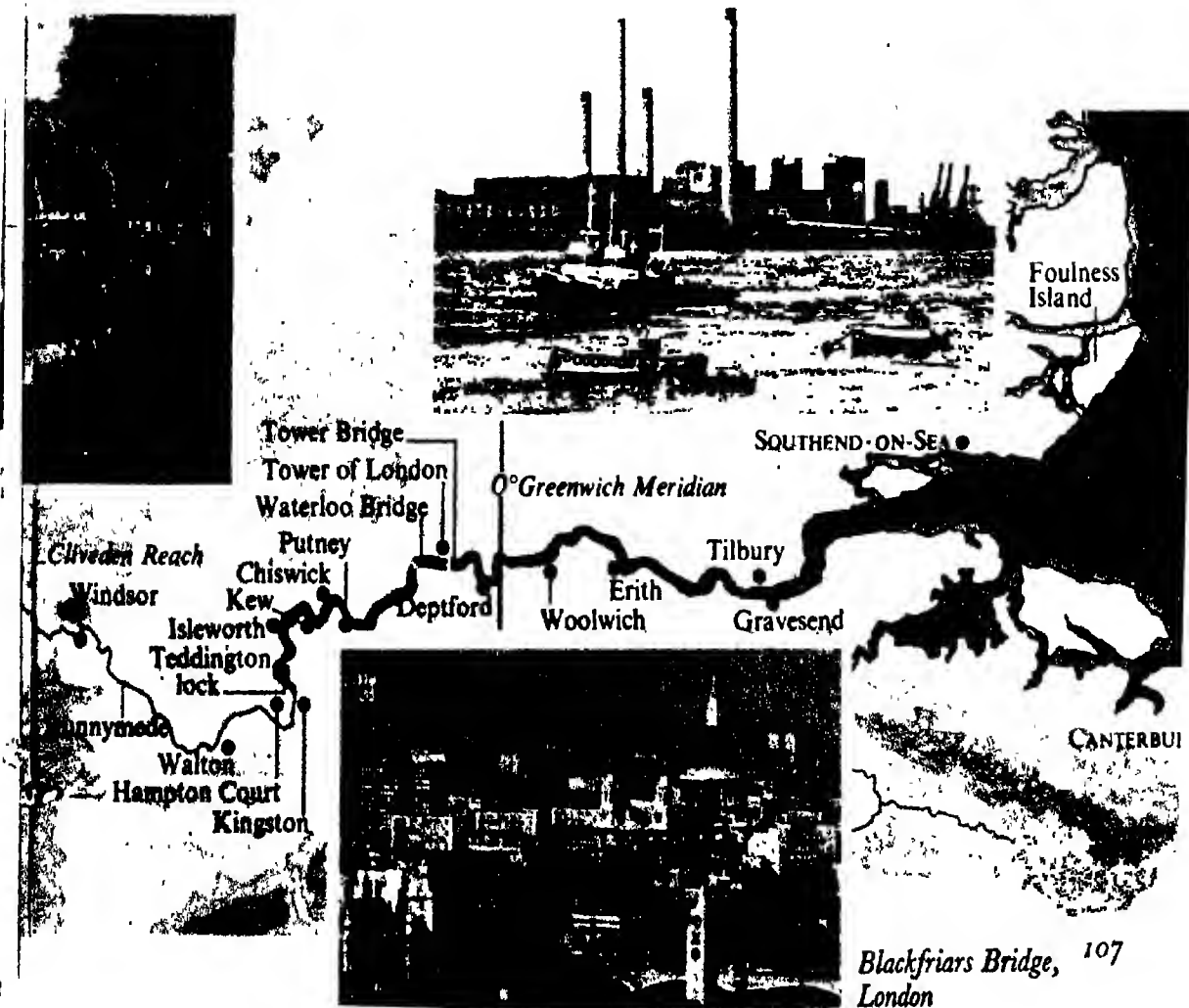
WE HAD a job to find it. Only the largest-scale map of Gloucestershire pinpoints the source.

When we walked down a lane to a field called Trewsbury Mead, five kilometres south-west of Cirencester, there wasn't a drop of water to be seen: just a circle of stones where the spring rises after heavy rain, and a sculpted figure of Father Thames, with a chipped nose and a baffled expression as though he had mislaid his river.

Following a dried-up channel, we went more than 1.5 kilometres in the midsummer sun before discovering a narrow stream. As my teenage son Chris said, straddling it with his feet: "*This is the Thames?*"

A humble beginning for a great river, yet the trickle at the foot of the gentle Cotswold hills grows by means of its many tributaries to a broad waterway running 344 kilometres to the open sea—a winding thread strung with incomparable jewels like Oxford and Runnymede,

Gravesend



*Blackfriars Bridge, 107
London*

Westminster Abbey and the Tower of London.

Old Father Thames is old indeed—at least half a million years, say the geologists. The bones of Stone Age rhino, elephant and oxen have been found in sand and gravel deposited by the river. Each of the succession of invaders who helped shape England left traces along the riverbank, from Roman mosaic to Viking weapons and the stonework of Norman castles.

As the nineteenth century politician John Burns once boasted to American visitors: "The St. Lawrence is water, and the Mississippi is muddy water; but the Thames is liquid history!"

Stream of Traffic. Many rivers are longer, broader, more spectacular. Few have been put to such concentrated use for such a span of time. The Thames was for seven centuries the main route from London to the west; then, when the railways robbed the upper river of its working role, it became a playground which now floats some 25,000 pleasure craft. Moreover, it provides water to meet 70 per cent of London's needs. The capital itself remains one of the world's greatest ports, even as it was in Julius Caesar's day. With 810 hectares of docks, it handles nearly a third of Britain's overseas trade.

To poets, sweet Thames runs softly, but it can spring unpleasant surprises. Heavy rain swelling its tributaries can transform the three-kilometre-an-hour current of the

upper river into a rampaging torrent. Let a storm break in the North Sea, and the tide that runs through London comes within centimetres of flooding the city. Londoners are lucky that the Thames's bad moods are rare.

Country Life. To travel the Thames is to travel through nine counties in the heart of England—though if you start as we did some 19 kilometres downstream from the source, where the "right of navigation" begins, you'll find the water barely deep enough for a canoe.

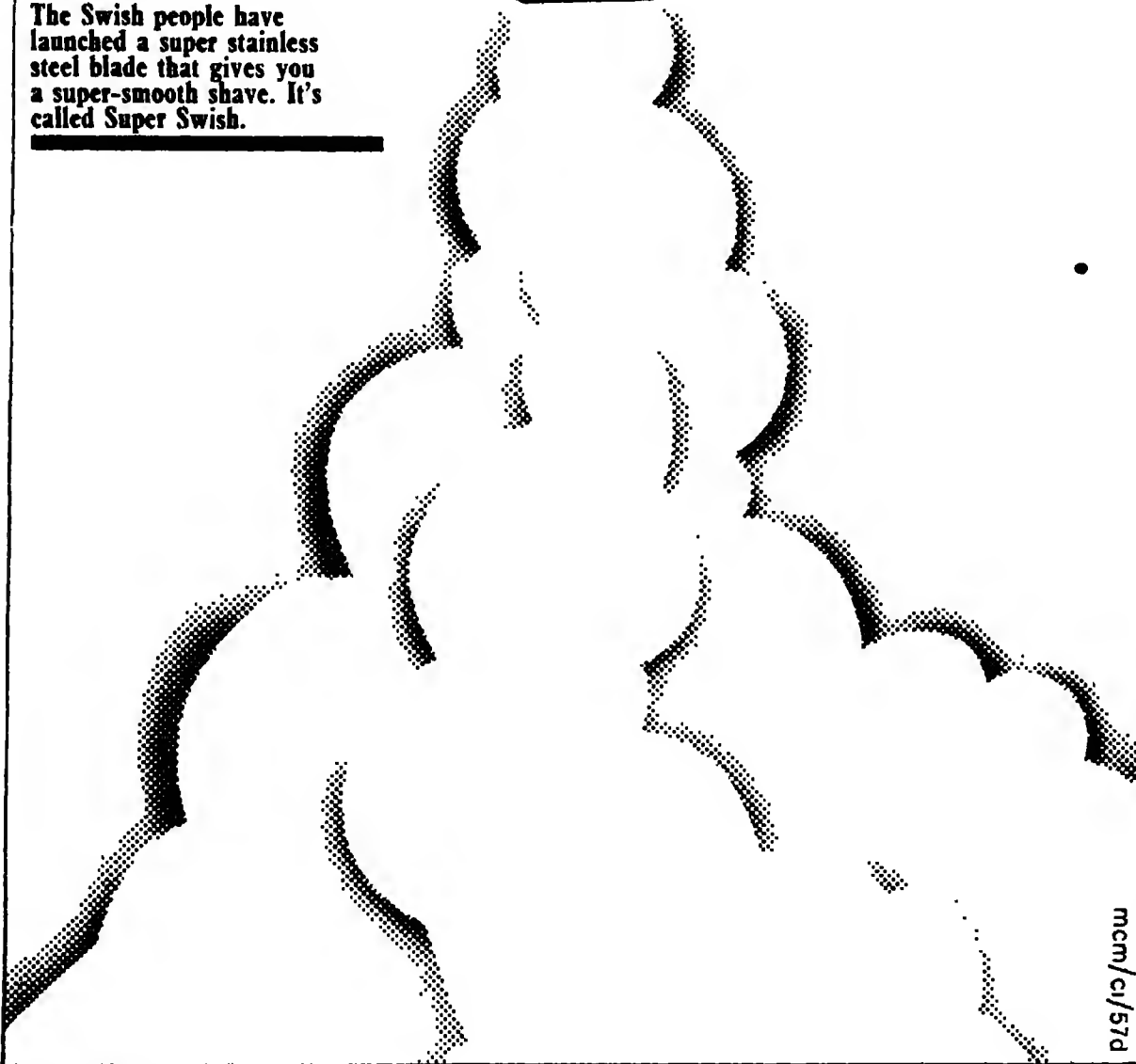
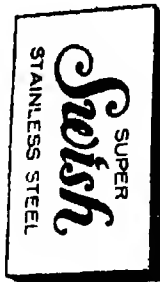
Paddling away from the small town of Cricklade, Wiltshire, we had the Thames to ourselves. It was no more than six metres wide as we rippled over the reeds and beneath overhanging trees. For kilometre after kilometre, we saw only occasional clusters of cottages—like Radcot, where the grassy bank was once a wharf from which Cotswold stone was rafted down to London to be used in the building of St. Paul's Cathedral.

When we reached Pinkhill, we had met only two punts in 38 kilometres, but after we hired a small cabin cruiser, *Sprat V*, and steered for the distant spires of Oxford, more and more craft appeared. Among them were skiffs like the one in which university lecturer Charles Dodgson rowed three small girls to Godstow one afternoon 110 years ago; telling them the story that he later published under the pseudonym Lewis Carroll, as

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STAGE I: THE BLAST OFF

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mcm/ci/57d

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Extra long-lasting: because the blade is made of a specially processed hardened alloy.

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^{SUPER}Swish is a super blade!

**Manufactured by: Centron Razor Blade Co. Marketed by: Home Products Marketing Agency,
13, Walchand Hirachand Marg, Bombay 1.**

Alice's Adventures in Wonderland.

Near Oxford, we chugged by Port Meadow, 160 hectares of common land where, since Edward the Confessor's reign, every Freeman of the city has had the right to graze cattle and horses. We stopped to watch what looked like a Wild West round-up, and found to Chris's delight that it was being led by a real Sheriff—the Sheriff of Oxford, supervising the annual surprise inspection at which all stock on the Meadow are impounded. Only Freemen escape a levy of Rs. 95 for each animal.

Beyond Abingdon, Berkshire, we sailed along the most dramatic stretch of the Thames: Goring Gap, where the river carves a deep cleft in the Chiltern hills. Carefully keeping within the seven-knot Thames speed limit, we cruised towards Henley, the mecca of every oarsman.

Each summer since 1839 this quiet market town has played host to the Royal Regatta, which now attracts competitors from countries all over the world and has lent its name to regattas in Canada, Australia and the USA. A uniquely English institution, the "Royal" is professionally run by a committee of amateurs—"all of whom," commented rowing authority Hylton Cleaver, "wear throughout the week white trousers a shade too small, blazers of faded hue, and shrunken caps."

We steered cautiously down this

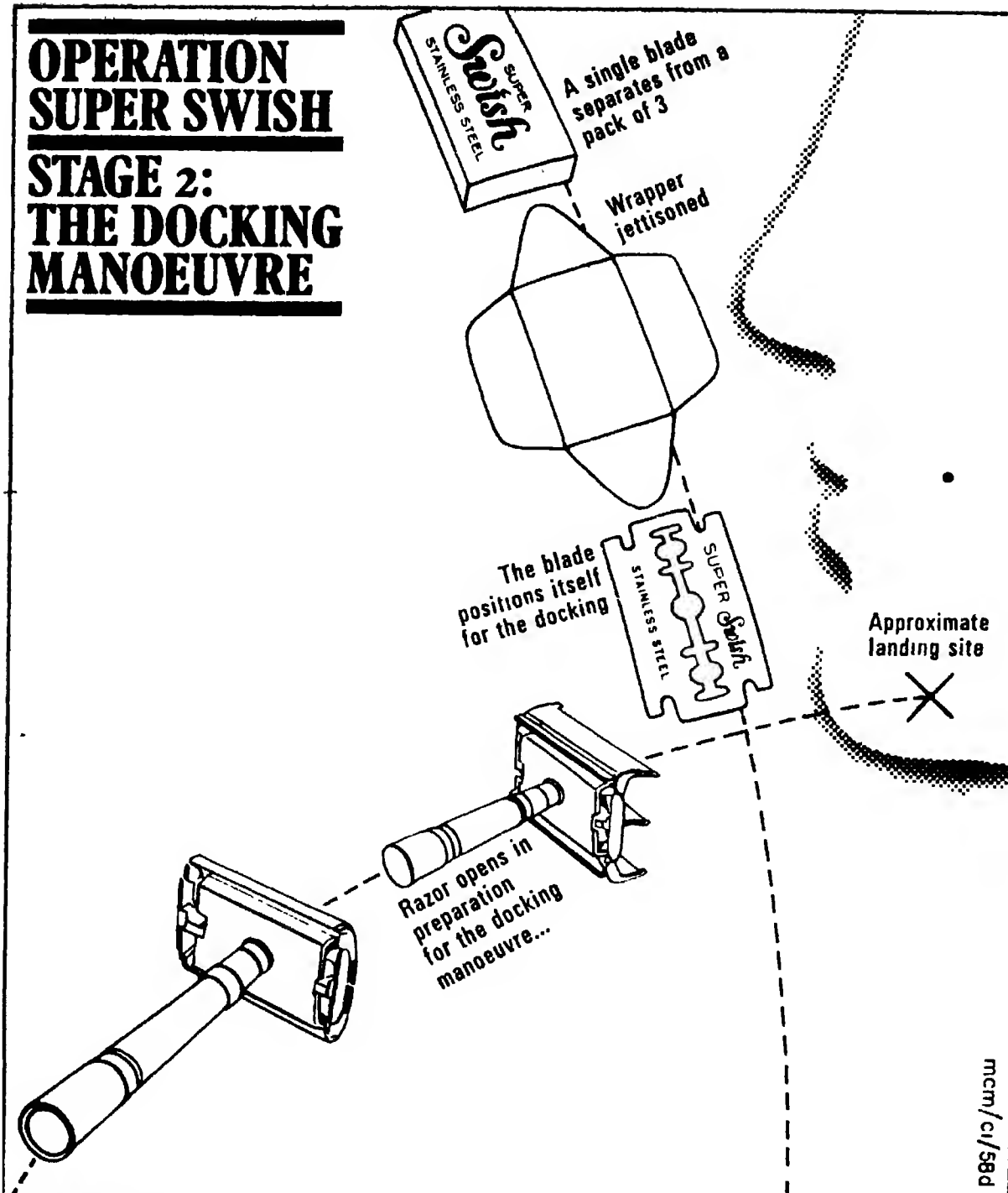
busiest stretch of the upper river—every year, more than 30,000 boats use each of the eight locks between Henley and Windsor—and potted on to pretty Cookham village, where the boatyard owner holds the splendidly medieval title of Keeper of the Queen's Swans. It is no sinecure, for there are several hundred of these Royal birds to be cared for on the Thames. Most are the property of the Queen, but some belong by ancient right to two of the City guilds—the Vintners and Dyers.

In July, when the Swan-Upping ceremony takes place, you can see six skiffs carrying the Queen's banner and those of the guilds in stately procession on the river. The rowers wear scarlet, blue or white jerseys with white trousers, and the helmsmen have swans' feathers in their caps. Their task is to "take up" or count the birds, and mark young cygnets: one nick on the beak for the Dyers', two for the Vintners', while the Queen's remain unmarked.

Animal Magic. Near Cookham, Kenneth Grahame wrote *The Wind in the Willows*, based on bedtime stories and letters to his small son; it was easy to imagine Ratty, Mole, Badger and Toad by the water's edge. Then, after passing through beechwood-lined Cliveden Reach, *Sprat V's* engine echoed under Maidenhead Rail Bridge, with its two 39-metre arches, designed by Isambard Kingdom Brunel more

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STAGE 2: THE DOCKING MANOEUVRE



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than 130 years ago, and in the distance we could see Windsor Castle.

From Windsor downstream, the Thames richly earns its description as liquid history. Within half an hour we reached Runnymede, the most famous of all meadows, where an inconspicuous tablet bears the legend: "In these Meads on 15th June, 1215, King John, at the instance of deputies from the whole community of the Realm, granted the Great Charter, the earliest of constitutional documents, whereunder . . . every individual [was] perpetually secured in the free enjoyment of his life and property."

Stately Ghosts. Now *Sprat V* came upon spacious parkland with sheep and deer roaming round the grandest Tudor house in England: Hampton Court. Cardinal Wolsey started to build it as his private palace in 1514, but the ostentation of a house with bedrooms for 280 guests offended Henry VIII. Wolsey tactfully presented it to him. Five of Henry's wives lived there, and Jane Seymour and Catherine Howard supposedly haunt it still. To Chris's disappointment they failed to materialize for us as we explored the state apartments and visualized stout Henry jousting in the Tiltyard.

However, there was consolation in cracking the secret of the famous Hampton Court Maze, planted in the reign of William III and perhaps the most difficult in Britain. We reached the centre by means of the formula: left on entering, right on

the first two occasions where there is a choice, then left thereafter.

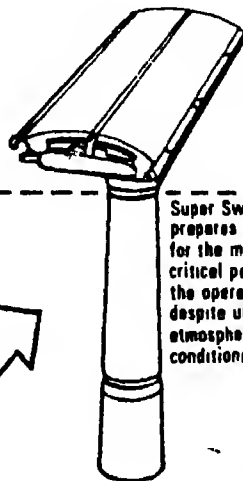
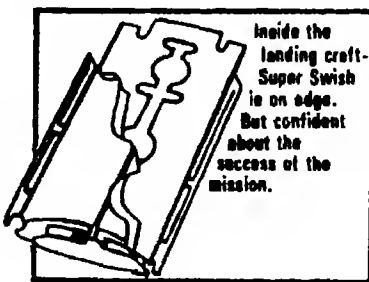
Landlubbers like us can amble along the 214 kilometres of gentle river from Cricklade to Teddington lock, but beyond Teddington weir the Thames is tidal, scoured by currents from the estuary 109 kilometres away, and is best tackled only by skippers knowledgeable enough to navigate a river increasingly busy with commercial traffic. There are other hazards, too: tides that rise as much as 6.7 metres, and treacherous driftwood hauled from the water at the rate of 8,000 tons a year.

So we left *Sprat V* at a boatyard and walked along the towpath towards Isleworth. With herons roosting in the trees of Syon Park on one side, and on the other the Royal Botanic Gardens at Kew, it was hard to believe that central London was only 11 kilometres away. But soon after we took to the water again in the big passenger-carrying catamaran *Suerid*, the suburbs came crowding closer and we entered the six-and-three-quarter-kilometre Boat Race course between Chiswick and Putney Bridges.

Annual Rivalry. This year's race was the 118th to draw hordes of Londoners to the river and a spectacle comparable in public esteem with the Derby. They cheer on with passionate partisanship the Oxford and Cambridge crews in a trial of endurance which has been described as providing thousands of spectators with a few minutes' free thrill,

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STAGE 3: DESCENT THROUGH FOG



Powerful forces are at work, rendering the landing site invisible.

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and the oarsmen with 20 minutes' expensive agony. Choppy water can spell disaster: the Oxford boat sank in mid-race in 1951.

It seemed futile for anglers to fish here, with the Thames fenced in by the city, yet in fact it is now one of the cleanest urban rivers—far better than the Seine, Rhine or Hudson. In medieval times it was so full of fish that salmon was eaten by the poor, but by about 1900 parts of the tidal river were too badly fouled for marine life to exist. Since 1964, however, a Port of London Authority drive against pollution has been dramatically effective, and last year 57 different species of fish were identified along London's waterfront, among them herring, trout, and even salmon smelt.

City Lights. A bunch of straw dangled beneath Lambeth Bridge, the warning to ships that repairs are under way. Then, as *Suerita* forged ahead, the river opened out to display Westminster Abbey standing against the sky, and Big Ben's quadruple clock face soaring above the Houses of Parliament. At the water's edge, Whitehall Stairs remain a legacy of the days when the Thames was the city's main street, and Londoners took a boat as casually as they now catch a bus.

By Waterloo Bridge, the blue launches of the river police—in radio contact with Scotland Yard—waited watchfully at the world's only floating police station. Their fleet of 36 boats covers an 86-kilometre

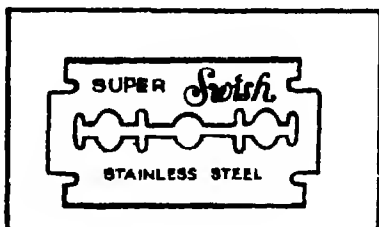
beat, from Staines to Dartford. A little further downriver, *Discovery* lay at her permanent moorings, an astonishingly small vessel to have taken Captain Scott's expedition to the Antarctic in 1901. In the background the magnificent dome of St. Paul's, its newly-cleaned stonework glowing in the sun, stood proudly at the crest of one of the twin hills on which the Romans built their walled city of Londinium.

To the 20,000 commuters who flood over London Bridge in the morning rush hour, the cargo ships moored below are a tantalising reminder of a more adventurous world. Only oil tankers are missing, forbidden to come within 55 kilometres for fear of pollution or an explosion that could start a new Great Fire of London. Here, by Billingsgate fish market and the Custom House, not far from the site of Shakespeare's Globe Theatre across the water, the commercial Port of London begins.

Down Limehouse Reach, bordered by London's Chinatown, we passed the place at Deptford where Francis Drake anchored *Golden Hind* on his return to England in 1581 after voyaging round the world, and was knighted by Queen Elizabeth I. A plan to preserve this tiny 100-ton galleon for posterity came to nothing, and she rotted away. But round the river curve at Greenwich an even smaller ship has had a safe berth since her own circumnavigation of the world in 1967,

OPERATION SUPER SWISH

STAGE 4: SUPER SWISH REPORTS SUCCESS ON EVERY COUNT



Thanks to the thousands
of photographs
sent by the landing
craft, the scientists were
able to assemble
the complete picture
Notice how the whole face
falls into place
and the cheeks are mapped.
The chin emerges
with astonishing clarity
and brightness.

To clear the confusion
about the
length of the sideburns
was one of the
objectives of the mission
And to define
the boundaries of the
shifting mass

Super Swish
covered the ground
in easy sweeps
It was child's play to
collect the samples
of stubbornest
stubble

Super Swish
cuts a corner
of
the moustache
and navigates
beautifully
around the
curve of the
mouth

The going
was smoother
than expected over
the zone of quells
and proved that the
'revine of cuts
and bruises'
is just an old wives' tale
And dismissed it as a medieval myth

mcm/ci/60d

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READER'S DIGEST

which earned another Francis a knighthood from the second Elizabeth. Today, Sir Francis Chichester's *Gypsy Moth IV* lies in company with the dry-docked tea clipper *Cutty Sark*.

Suerita ended her run at Greenwich, a stirring place for any lover of ships and the sea. In front of the National Maritime Museum stand the fine buildings of the Royal Naval College, once a hospital where Nelson lay in state before being rowed to St. Paul's Cathedral. We climbed the hill to the Old Royal Observatory and found a brass strip in the path, marking the Prime Meridian, the line of longitude 0° accepted worldwide since 1884.

"If you stand astride it," a visiting naval officer suggested to Chris, "you'll have one foot in the eastern hemisphere and the other in the west."

For the last stage of our journey, we enlisted a friend who had an

ocean-going cruiser, and wandered on down broad Sea Reach. Saxons and Vikings sailed this way; so did the extraordinary fleet of little Thames pleasure craft that crossed the Channel in 1940 to rescue an army at Dunkirk and help stem a worse invasion.

The water was fast widening. Gradually the mudflats, which had been with us since Tilbury, receded. Ahead lay the open horizon. By the time we turned towards Southend, on the north coast of the estuary, the southern shore had vanished in the haze 8 kilometres away. It was hard to believe this was the same river we had first met as a puny stream in a Gloucestershire meadow.

We leaned on the rails at the end of Southend Pier, almost two kilometres long, watching ships on their way to London, and agreed with Sir Walter Scott: "There are two things scarce matched in the universe—the sun in Heaven, and the Thames on the earth."

PHOTOGRAPHS PAGES 106 AND 107: PICTUREPOINT, CHRISTOPHER MORRIS, PETER KEEN, MALCOLM AIRD

Explaining Away

A BOOK lent out in 1935 by the San Francisco Public Library was returned recently. An anonymous note explained: "I'm a slow reader."

—Jack Rosenbaum in San Francisco *Examiner*

EDWARD G. ROBINSON gives a nifty excuse for his new beard: "It covers a multitude of chins."

—Jon and Abra Anderson in Chicago *Daily News*

ARGENTINIAN singer Alberto Roqui explained why he never sought a government post: "In South America a tenor lasts longer than a politician."

—Earl Wilson

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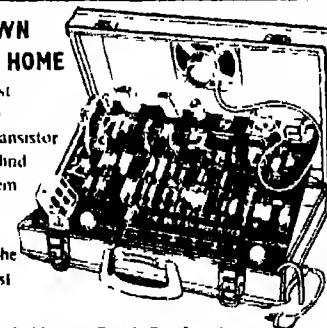
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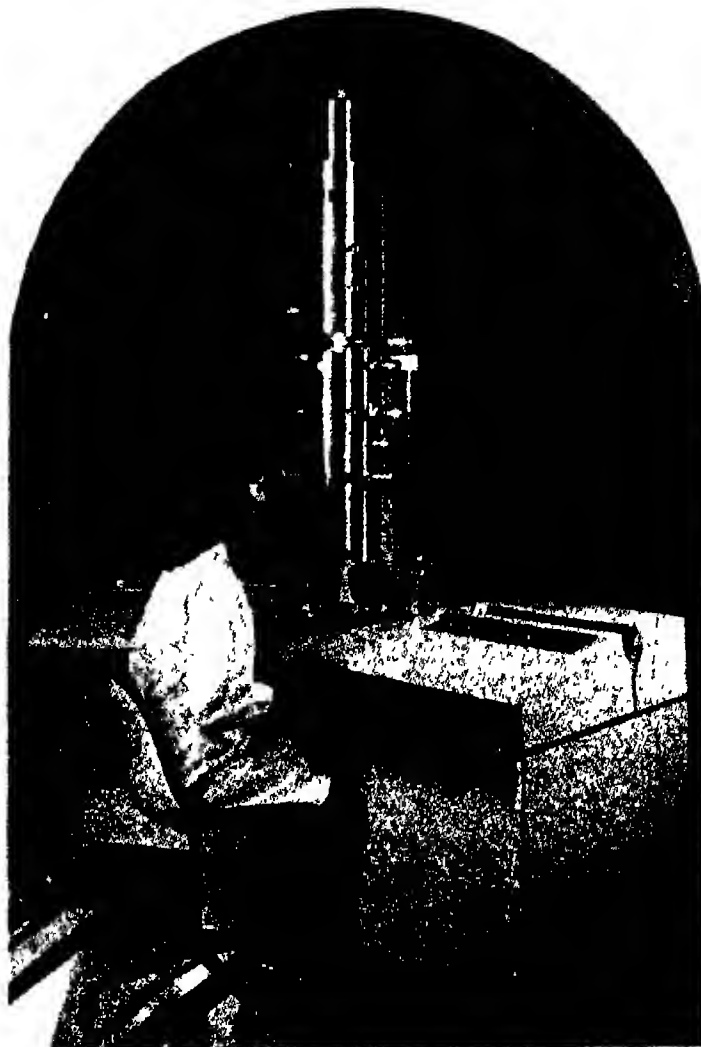
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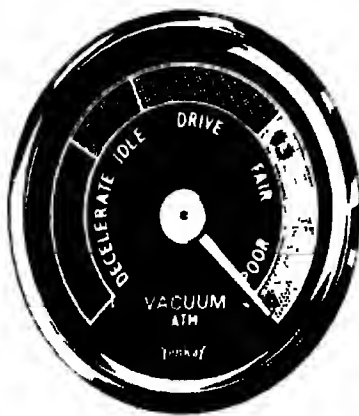
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fares !*

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by any other
airline ...
that's why,
I suppose.*

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Canada	35
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Her heart was as cold as stone but
Old Man Buzby loved her

The Petrified Woman

By LOREN EISELEY

IN THE proper books, you understand, there is no such thing as a petrified woman. I knew that, because I was a professional bone hunter. But bone hunters, like the men of other professions, have bad seasons. We had made enquiries in a score of western American towns and tramped as many canyons. We had sent the institution for which we worked a total of one Oligocene turtle and a bag of rhinoceros bones. Our luck had to change. Somewhere there had to be fossils.

I was cogitating on the problem under a coating of lather in a barber's chair when I became aware of a voice. "I'm telling you," the man's voice boomed. "A petrified woman, right out in that canyon. But he won't show it to nobody."

I managed to push an ear up through the lather. "Mister," I said, "I'm reckoned a kind of specialist

in these matters. Where is this woman, and how do you know she's petrified?"

I knew perfectly well she wasn't, of course. Flesh doesn't petrify like wood or bone. Just the same, you can never tell what will turn up. Once I had a mammoth's vertebra handed to me with the explanation that it was a petrified griddle cake.

Yes, he told me, the woman was petrified all right. Old Man Buzby wasn't a feller to say it if it weren't so. But Buzby was a strange one. An old bachelor, you know. And when the boys had wanted to see it, the old man had clammed up.

But seeing as I was interested in these things and a stranger, he might talk to me and no harm done. It was the trail to the right and out and up to the overhang of the hills. A little tar-paper shack there.

I asked Mack to go up with

me. He was silent company, but one of the best bone hunters we had. In a day we reached the place. When I got out of the car, I knew the wind had been blowing there since time began. Everything was leaching and blowing away by degrees, even the tar paper on the roof. Out of the door came Buzby. There was an air of faded dignity about him.

Now in that country there is a sort of etiquette. You don't drive out to a man's place, a bachelor's, and you a stranger, and come up to his door and say, "I heard in town you got a petrified woman here and I sure would like to see it." You've got to use tact.

You get out of your jeep slowly, while the starved hounds look you over and get their barking done. You fumble for your pipe and explain casually you're doing a little looking round in the hills. About then the person glimpses the equipment you're carrying and usually jumps to the conclusion that you're scouting for oil. You can see the hope flame up in his eyes and die down again as you explain that you're just hunting for bones.

But Buzby wasn't the type. I don't think he even thought of oil. He was small and neat and wore a

pince-nez. I could see at a glance that he was a city man dropped, like a seed, by the wind. He had been there a long time.

Buzby invited us into the neat two-roomed shack to see his collection of arrowheads. He was precise about his Red Indian relics as he was precise about everything. But I sensed, after a while, a touch of pathos, the pathos of a man clinging to order in a world where the wind changed the landscape before morning and not even a dog could help you contain the loneliness.

On the Scent. "Someone told me in town you might have a wonderful fossil up here," I finally ventured, poking in a box of arrowheads and watching his shy, tense face.

"That would be Ned Burner," he said. "He talks too much."

"I'd like to see it," I said, carefully avoiding the word *woman*. "It might be of great value to science."

He flushed angrily. "I don't want any of them hereabouts to see it," he cried passionately. "They'll laugh, and they'll break it, and it'll be gone like—like everything." He stopped, his dark eyes widening with pain.

"We are scientists, Mr. Buzby," I urged gently. "We're not here to break anything. And we don't have to tell anyone what we see."

He seemed a little mollified at this; then a doubt struck him. "But you'd want to take her away, put her in a museum."

I noticed the "her," but ignored it. "Mr. Buzby," I said, "we would

LOREN EISELEY is professor of anthropology and the history of science at the University of Pennsylvania, and curator of Early Man at the University Museum. He has written seven books, including *The Invisible Pyramid* (Rupert Hart-Davis), *The Immense Journey* and *The Unexpected Universe* (Gollancz).

very much like to see your discovery. It might be that a museum would help you save it from vandals. I'll leave it to you. If you say no, we won't touch it, and we won't talk about it in town, either."

I could see him hesitating and began to see what he wanted. He intended to show it to us in the hope we would confirm his belief that it was a petrified woman. At last he said, "Why don't you camp here tonight? Maybe in the morning . . ."

I remembered the sound of the wind the next morning. In that country the wind never stopped. It starts on the flats and goes down into those canyons, flaking and blasting at every loose stone or leaning pinnacle. It scrapes the sand away from pipey concretions till they stand out like strange, distorted sculptures. I began to suspect what we'd find.

Once he had given his consent and started, Buzby hurried on ahead. Over boulders and fallen trees. Higher and higher into the back country. Towards the last he outran us, and I couldn't hear what he was saying. The wind whipped it away.

But there he stood, finally, at a niche under the canyon wall. He had his hat off, and for a moment was oblivious to us. "This must be it," I said to Mack.

It was a concretion, of course—an oddly shaped lump of mineral matter—just as I had thought after seeing the wind at work in those canyons. It wasn't bad. There were

some bumps in the right places, and marks that might be a face, if your imagination was strong.

Buzby didn't wait for me to speak. He blurted out intensely, "She's beautiful, isn't she?"

"It's remarkable," I said. "Quite remarkable." And then I just stood there not knowing what to do.

He seized on my words with such painful hope that Mack moved away and started looking for fossils.

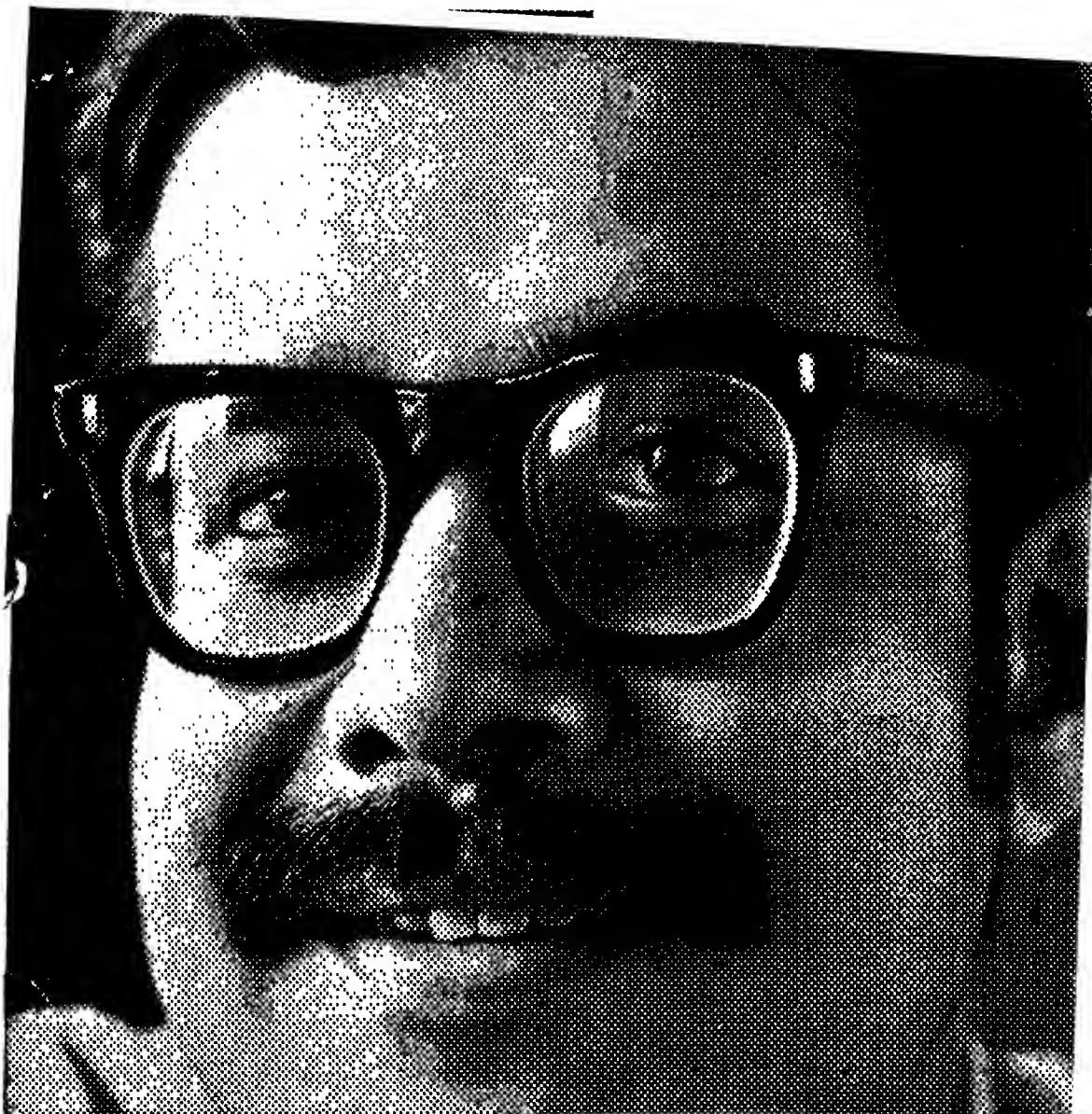
The Dam Breaks. I didn't catch it all. The words came out in a long, aching torrent, the torrent damned up for years in the heart of a man not meant for this place. You're tough at first. He must have been to remain there. Then suddenly you're old and you're beaten, and there must be something to talk to and to love. And if you haven't got it, you'll make it in your head or out of a stone in a canyon wall.

He had found her, and he had a myth of how she came there, and now he came up and talked to her in the long afternoon heat while the dust devils danced in his failing maize crop. In another year, she would be talking to him.

"It's true, isn't it, Doctor?" he asked me, looking up with that rapt face, after kneeling beside the niche. "You can see it's her. You can see it plain as day." For the life of me I couldn't see anything except a red scar writhing on the brain of a living man who must have loved somebody once, beyond reason.

"Now, Mr. Buzby," I started to

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Man's Best Underwater Friend, the Dolphin

By STANLEY BROCK

Warm-hearted, quick-witted, he's an almost human helpmate

ONE OF the most remarkable things about the dolphin is its attitude towards mankind. Here is a predator of the Toothed Whale group that includes porpoises and killer whales, armed with sharp, prominent teeth—as many as 200 in some of its 30 to 40 species—which could snap off an

arm. It eats eight to nine kilograms of fish and squid a day. Though its hard bony snout could be a formidable battering ram, attacks by wild dolphins on humans are unknown. Indeed, dolphins are being trained to work with man in underwater teamwork.

At the Makapuu Oceanic Centre



in Hawaii, I had the memorable experience of participating in this training with a dolphin called Makai. Scientists were conducting tests from an undersea "mobile home" called Habitat II. One test was designed to determine if Makai would deliver a tool to me as I worked out of the habitat at a depth of 22 metres. (Using dolphins as couriers would avoid the problem of having either to resurface a habitat or send up divers, involving lengthy periods of decompression.)

I lowered myself through a hatch into the murky water, unzipped the front of my wet-suit and pulled out a small pouch containing a tin "cricket" noisemaker and some dead mullet—dolphins' favourite food. Makai was with his handler in

a small floating cage on the surface.

I clicked the cricket, making the signal to which the dolphin had been taught to respond. Then I waited, searching the water anxiously. Suddenly, Makai's grey shape emerged from the murk. I heard a slight buzzing sound: the dolphin's sonar system seeking me out. Now he was bearing down on me like a torpedo, seemingly destined to ram me. But he stopped barely 40 centimetres from my face mask, braking with no obvious movement of tail or flippers. Gently, I reached for the large spanner which hung from a rubber handle in his mouth. For a moment I was alarmed at the formidable dental array before me. Hastily, I took the spanner and stuffed some mullet into the waiting jaws. Then, as swiftly as he had come, Makai turned and shot towards the surface.

The dolphin's uncanny ability to locate objects beyond the range of its limited eyesight is made possible by its special echo-location system. Not even the most sophisticated of man's sonar equipment can approach the efficiency of the dolphin's. Within a range of 15 metres it can tell what an object is, its size and composition, and perhaps how fast it is moving.

It is generally believed that the dolphin's sonic impulses originate in air sacs in its head and are fired



LANCASHIRE-BORN Stanley Brock is a Fellow of the Royal Zoological Society. His autobiographical book *Jungle Cowboy* was featured in Reader's Digest for May 1971.

into the water through the "melon," a fatty organ in the forehead. These impulses strike objects in their path—this was the sound I heard when Makai approached me—and, bouncing back, are picked up by the dolphin's lower jaw, then transmitted to its brain.

Dolphins have large and complex brains, a good part being associated with the auditory system. In the case of a two-and-a-half-metre-long Pacific Bottlenose, the brain weighs about 1.6 kilograms compared to the 1.4-kilogram brain of a 1.8-metre-tall man. Some scientists place its IQ between that of a dog and that of a chimpanzee.

While myth portrays dolphins as cheerful creatures, they are also sensitive and temperamental. Companionship is important. They move in packs in the open sea and solitary confinement in captivity often leads to sulking and loss of appetite. When angry, they beat the water with their tails or snap their jaws. Their smooth, hairless skin feels like a wet inner tube, and is highly sensitive to touch. I found that dolphins enjoy being patted, and frequently pat one another with their flippers. They communicate by a variety of grunts, squeals, clicks and whistles. One of these sounds is a distress call, used to warn of impending danger; another is a bark of anger.

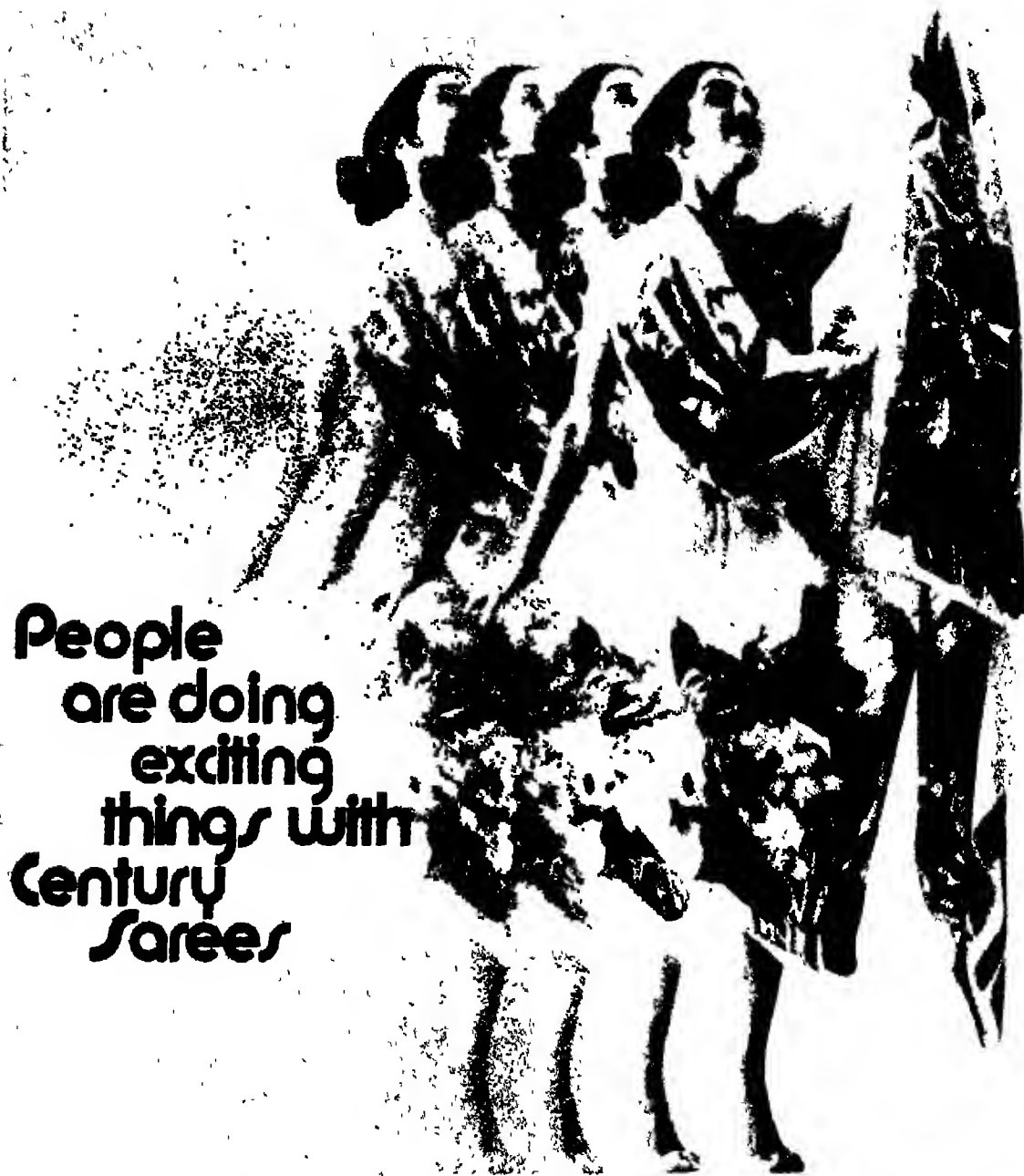
The dolphin breathes air like a land mammal. What looks like a blowhole on top of its head covers two inside nostrils which permit

air to pass but expel any water that enters accidentally. With its powerful chest muscles it breathes in gasps. The dolphin can easily remain under water for up to six minutes before it needs to surface. (Baby dolphins are born tail first, which helps prevent them from drowning. They immediately swim to the surface for a first breath, sometimes aided by the mother.)

Built for Speed. Male Pacific Bottlenoses grow to a length of 4.25 metres, weigh up to 450 kilograms and have a life expectancy of 20 to 25 years. Despite their size, they have an incredibly efficient propulsion system, which has long fascinated designers of torpedoes and submarines. Dolphins propel themselves with up-and-down thrusts of their tail flukes, yet create little water turbulence and virtually no wake. One scientist at Makapuu clocked the Pacific Bottlenose at about 30 k.p.h.—and this may be far below a Bottlenose's maximum speed.

The quick, agile dolphin is very trainable, as can be seen at Port Elizabeth's oceanarium, where trainer Colin Taylor is studying its behaviour. The first phase is "whistle conditioning." The animal is taught that whenever a whistle is blown, the handler will throw a dead mullet into the water.* When the dolphin associates the whistle with the guarantee of a fish, the

* In the sea, dolphins feed only on live fish and will not scavenge like sharks. A new captive must be taught to eat dead fish.



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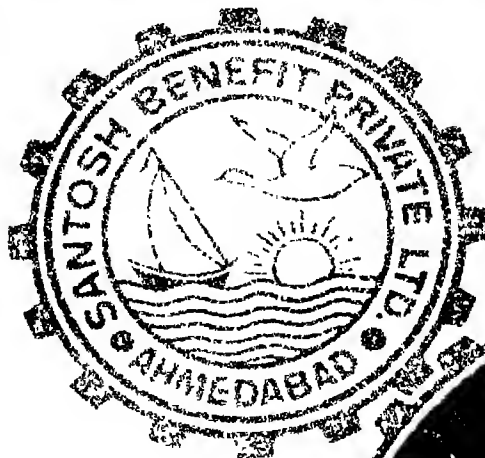
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trainer starts teaching other responses, such as jumping out of the water. The handler waits for the animal to do this spontaneously in its tank; as soon as it does, the whistle is blown and a fish is thrown in. Eventually, the dolphin associates jumping with a reward of food. A quick student, it is bouncing a ball on its nose within a month.

Sense of Direction. An Atlantic Bottlenose named Tuffy was trained by scientists at the Naval Undersea Research and Development Centre in San Diego, California, to dive to an underwater device which emitted a signal. After homing in on the source of the signal, Tuffy would turn it off by pushing a switch with his nose. Then he'd shoot back to the surface and exhale into an inverted water-filled funnel positioned 30 centimetres beneath the surface. Thus, expired air from any depth or duration of dive could be analysed. Tuffy enjoyed his work so much that, when released, he would actually follow his trainer's boat to the site.

If man surfaces too rapidly from depths below nine metres, nitrogen bubbles are trapped in his blood vessels, causing the often fatal "bends." Tuffy showed no signs of distress. Underwater cameras revealed that his chest began to collapse nine metres down, indicating that a dolphin's rib cage is flexible, its lungs quite elastic.

Scientists concluded that because of this rubber-band structure, air is

compressed away from the dolphin's alveoli (the air cells of the lungs where air is mixed with the blood). As a result, nitrogen is prevented from dissolving in the blood in quantities large enough to produce the "bends." Such knowledge may one day make life easier for divers.

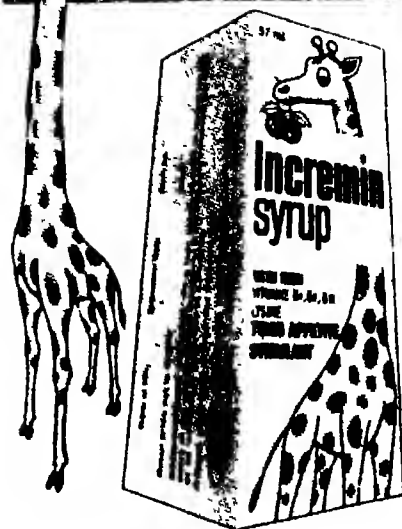
Although dolphins are aiding mankind, they need protection. Dolphin meat is edible, and Japan, New Guinea, Turkey and some South American countries catch thousands of dolphins annually. Many countries, including South Africa, have local regulations to protect dolphins from being harvested commercially. But, since tuna and dolphins habitually cruise together, death by accident remains a threat. An estimated 250,000 dolphins are trapped and drowned each year in the nets of tuna fishermen.

An American cetologist and two San Diego scientists have experimented with recordings of the dolphin's arch-enemy, the killer whale, to frighten dolphins out of the tuna seines through a special pneumatic rubber gate. The gate is raised by injecting it with compressed air, lowered by deflating it. One successful test has been made, and such equipment may become standard on tuna clippers in the future.

I hope so. The dolphin has done much for man, and has the potential to do much more. It would be a tragedy if we were ever to lose this friendly, fascinating aquatic ally.

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QUEEN OF PARIS CHURCHES

BY WILLIAM BIRNIE

Her majesty untarnished by her eventful
past, Notre-Dame is filled with echoes of
an eight-hundred-year reign

IN THE fabled year 1492, while sails of the three-vessel flotilla of Christopher Columbus billowed westward towards the New World, a bishop from Armenia visited Paris and marvelled at the twin-towered cathedral which dominated the city from an island in the River Seine. The great church was already 247 years old and, chronicled the bishop, "so admirable that it is impossible for the tongue of man to describe it." Since then, countless visitors, in recent times more than a million a year, have worshipped beneath its Gothic arches, gasped at the rainbow miracles of its three rose windows, photographed its soaring buttresses, and shared the bishop's appraisal of Notre-Dame.

Today, the cathedral's façade looks more as it did originally than it has for centuries. Its face has been tenderly washed with plain water and the warm tan tones of the

venerable stones now stand proudly free of ancient grime and modern soot.

It is symbolic of the wonders of this great church that, in erecting the iron and steel scaffolding for the cleansing, twentieth-century engineers used the same apertures in the façade that the original builders had left for their log scaffolding as they built, stone on stone, onward and upward, 800 years ago.

Some may prefer the cool perfection of high Gothic in Chartres and Reims, but, for many, nothing surpasses the rugged, honest humanity of the Paris cathedral. Dedicated to the Virgin Mary, it tells her life story in stone, wood, stained glass, oil painting, tapestry. Within its massive walls, master builders evolved from the solid rotundities of the Romanesque churches the breathless vaulted arches of the Gothic, learning as they laboured

how to build higher towards heaven than ever before.

The year 1163 was no time to embark on such a fantastic undertaking as Notre-Dame. Louis VII had already lost more than half his kingdom to Henry II of England, and the fragile remnants of his lands were being threatened from across the Rhine by Frederick Barbarossa. But contrary to reason, Louis and peasant-born Bishop of Paris, Maurice de Sully, determined to build.

Construction proceeded with the same ingenuity that enabled inspired men to build the Pyramids and the Parthenon. Up to 1,500 stonecutters, carpenters, glaziers and smiths worked under the direction of the master builders who, while lacking the blessings of the steel crane and the electronic computer, had at their command the principles of the inclined plane, lever and pulley. Their mathematics was acquired less from the Greeks than from the Arab artisans of Spain.

Huge blocks of fine-grained limestone called *cliquart* were quarried from up to 16 kilometres away and dragged by oxen—and on rare occasions by devout pilgrims—to the base of the cathedral. As the structure rose higher, these blocks were hauled upwards by ropes wound round huge drums which turned as men inside climbed endlessly like squirrels in a cage. During construction, the interior of the nave looked like a fantastic forest, with timbers criss-crossing up from the

floor to support the arches until the keystones were eased into place.

Certainly, the decision to build the massive cathedral reflected faith in God, but it was no less an act of faith in man to direct his destiny in a time of adversity. That faith proved justified as Notre-Dame survived the intrigues, wars, revolutions and occupations of the next eight centuries.

You sense the dual involvement of man and spirit as you walk through the radiant dusk of the nave.

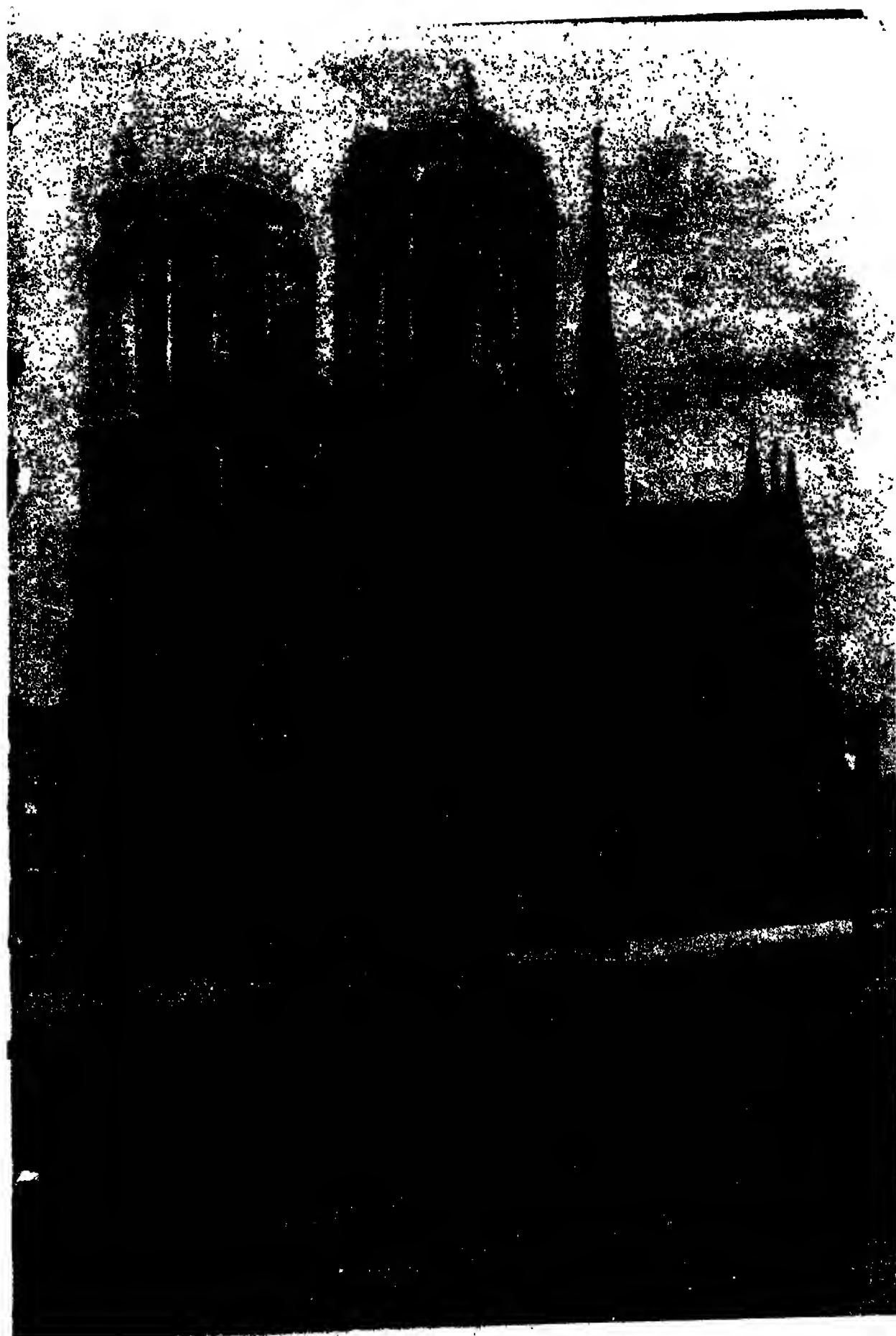
Did Louis IX pause by *this* pilared column, bearing aloft Christ's Crown of Thorns, which he carried home from the Crusades and which still rests in the cathedral treasury? Did a 67-year-old peasant woman lean against *this* column in 1455 while she walked towards the first of the tribunals which would absolve and eventually sanctify her daughter, Jeanne d'Arc?

Having summoned the Pope from Rome, did the First Consul wait by *this* column during the ceremony in 1804, before he seized the crown from the Pope's hands and crowned himself Emperor Napoleon I? And are the scars on *this* column from the bullets that German soldiers or collaborators fired from the upper galleries when General de Gaulle joined in the Te Deum celebrating the liberation of Paris in 1944?

Colourful as were events within

Utrillo's "Notre-Dame de Paris," c. 1927 (161.5 × 113 cms.). This painting is now in a private collection

PAINTING © SPADEM PARIS 1972 PHOTO: EDOUARD



Notre-Dame, they are no more dramatic than what happened to the building itself. Before they could even begin the foundations, the builders had to raze an earlier basilica of Notre-Dame and another one dedicated to Saint-Etienne dating back to the sixth century. Here also have been unearthed Gallo-Roman altars.

Never Ending. Notre-Dame was completed in less than 100 years, but changes were made soon after the last stone was hoisted to the top of the north tower in 1245, and continued all through the ensuing centuries as aesthetic tastes changed and Christian faith waxed and waned. In the mid-thirteenth century both north and south transepts were rebuilt; during the reign of Saint Louis, great-grandson of Louis VII, an extra entrance, the *Porte Rouge* or Red Door, was added.

In the early 1700s, all the stained glass except for the rose windows was replaced by clear glass etched with the three-leafed fleur-de-lis, and the whole interior was painted white. Later, under Louis XV, the church fathers felt that the central portal was not wide enough for royal and religious ceremonies, and in 1771 some of the carvings were ruthlessly cut through to accommodate them.

Notre-Dame suffered its worst indignities during the French Revolution, when the free-standing figures round the portals were hauled down by revolutionaries and

decapitated. Fifteen of them were recovered in 1839 when city authorities dug up some odd-looking boundary markers in a coal yard on the Left Bank. They turned out to be the up-ended thirteenth-century statues. Now they stand forlornly in the north tower.

Mobs also toppled the 28 three-metre figures from the Gallery of Kings, which traverses the façade 18 metres high. But their revolutionary zeal was woefully misguided: the statues they thought represented the kings of France were actually the rulers of Israel and Judah. The Gothic gates before the altar were torn up for spears, and all but the biggest bells were melted down for guns and bullets.

By 1793, the nave was piled high with hundreds of wine kegs and plans were under way to sell the building. When Napoleon returned the property to the church fathers in April 1802, Notre-Dame was in a sorry state—the result not only of the revolutionaries' activities but of decades of neglect when Gothic architecture was despised as barbaric.

To Immortality. The cathedral might be no more than a pile of rubble today if a handful of artists and writers hadn't awakened the nation's conscience. One was novelist Victor Hugo, who published his best-selling *Notre-Dame de Paris* in 1831. Another was a young architect, Eugène Viollet-le-Duc, whose special interest was Gothic art.

When the French Government

eventually voted funds to restore Notre-Dame in 1843, Viollet-le-Duc's designs were accepted. He worked on the cathedral during the next 20 years of his life and much of the décor the visitor sees today—including all the figures that adorn the Gallery of Kings and the cathedral's celebrated gargoyles, replacing those pushed or tumbled to destruction—must be credited to him.

After the restored cathedral was officially reopened in 1864, the structure remained virtually untouched until the washing completed last year. Sandbags were piled before the west portals during the First World War, but the shells never struck. During the occupation in the Second World War, the Germans left Notre-Dame pretty much alone, except for filling the nave with the thunderous chords of Beethoven and Wagner during occasional concerts for their troops.

As many as 13,000 people have filled the cathedral on such occasions as Liberation Day. St. Peter's in Rome is more than twice as big, but the dimensions of Notre-Dame are hardly paltry: it is 130 metres long, 35 metres high from the 6,038-square-metre stone floor. It could comfortably encompass, heaven forbid, a football pitch.

But spirit, not statistics, is the true

essence of Notre-Dame. The façade with its twin towers has a calm surety of proportions. It makes a huge rectangle, 40 metres wide, with the tower tops reaching heavenward 68 metres. In the centre, like a jewel in its setting, is the 9.5-metre rose-window. The result is an equilibrium which pleases the eye and satisfies the soul. No wonder artists, since the seventeenth century, have delighted in painting the cathedral.

Crowning Glory. Whoever has the energy to climb the winding and ever narrowing stairs to the top of the towers is rewarded by a thought-provoking sight. Dizzily, far below lies the square from which the distances from all cities in France to the capital have always been measured.

Off to your left looms the Eiffel Tower, and in the distance, to the right, the basilica of Sacré-Coeur gleams white above the nightclubs of Montmartre. Before you, the Louvre stretches along the right bank of the Seine, and the Arc de Triomphe rises on the horizon at the peak of the Champs-Élysées.

It is surely one of the world's most spectacular views. But it is sobering to realize that antedating all this is the sturdy structure you are standing atop, a monument to man's faith in both God and man.

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I CAN'T conceive of what a man's life is like if I don't come across some of the errors he has made. It is through our mistakes that our true personalities are revealed.

—Francesco Messina, quoted in *Sintesi*

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Personal Glimpses

GOLFER Gary Player used to tell people what he thought of each course when they asked him.

"Not any more," he says. "People got very upset when I told them the truth. Now I tell them all that they've got the greatest course in the world. And, you know something, this has helped *me*. If I think the course is awful, I play awful golf. But if I convince myself it's great, I don't spend my time out there thinking how bad it is."

—*Bits & Pieces*

COMEDIAN Flip Wilson, asked why he had selected a bulldog as a present for his children, explained, "So they would see that ugly face and discover all this love behind it—and never take anything at face value in the future."

—*Family Weekly*

"EACH day I am reborn. Each day I must begin again," cellist Pablo Casals said at 93. "For the past 80 years I have started each day in the same manner. It is not a mechanical routine but something essential to my daily life. I go to the piano, and I play two preludes and fugues of Bach. It is a sort of benediction on the house. But it is also a rediscovery of the world of which I have the joy of being a part. It fills me with awareness of the wonder

of life, with a feeling of the incredible marvel of being a human being. The music is never the same for me, never. Each day it is something new, fantastic and unbelievable. That is Bach—like nature, a miracle!"

—Pablo Casals, as told to Albert Kahn,
Joys and Sorrows

WINSTON CHURCHILL was the only politician I remember who consciously showed an intelligent interest in how to make a broadcast effective. Once, after a practice run, I offered some criticism of his delivery, emphasizing that the pace of a studio talk was different from that of a speech in an auditorium.

"Stand in front of me and conduct," he said. "I know the speech by heart, and I'll follow your beat."

He did, and the broadcast was a striking success.

—Harman Grisewood in *One Thing at a Time* (Hutchinson)

AMERICAN science writer Isaac Asimov relates: "My parents, Jewish immigrants, had a candy store in Brooklyn for many years. When they retired, they found time hanging heavy on their hands, so my father got a job and my mother went to night school to improve her knowledge of English, in which she was

READER'S DIGEST

entirely self-taught. In particular, she wanted to learn to write in English, and she achieved her goal in a surprisingly short time.

"One day, the teacher said to her, 'Pardon me, Mrs. Asimov, but are you a relative of Isaac Asimov?'"

"'He is my son,' my mother said.

"'No wonder you are so good at writing,' commented the teacher.

"My mother drew herself up to her full 1.5 metres and said coldly, 'I beg your pardon. No wonder *he's* so good at writing.'"

—*Treasury of Humour*

LORD ROBERT BADEN-POWELL, founder of the Boy Scout movement, was sensitive to other people's feelings.

As a boy he puzzled his schoolmates by ceremoniously taking off his football boots at half-time and changing into another pair. Eventually he explained that two of his aunts had each presented him with a pair of football boots. Not wishing to disappoint either of them, he used both pairs.

—William Hillcourt with Olive, Lady Baden-Powell in *Baden-Powell—The Two Lives of a Hero* (Heinemann)

DR. SIGMUND FREUD, the founder of psycho-analysis, explained how he established the now classical position of the analyst, behind the head of the couch, out of view of the patient.

"I used, sometimes, to make faces at some of the statements I heard," he said, "and I did not wish to be seen doing so."

—Mrs. Alix Strachey, quoted by Vincent Brome in *The Sunday Times Magazine* (London)

NEW Nato Secretary-General Joseph Luns, of the Netherlands, is expected to contribute much-needed informality and wit to the job. When he was

foreign minister, he once teased Soviet Foreign Minister Andrei Gromyko about Russian bugging of the rooms of foreign guests. Gromyko had come to see Luns off at Moscow Airport and presented him with three large jars of caviar.

"Dear colleague," Luns remarked, "this is really very amusing. Just last night in our hotel room, I told my wife it would be nice if we could take some caviar back home—say, three large jars. I looked at the ceiling and repeated it very, very loudly. And here are just the jars I had in mind—as if someone had heard my wish."

Gromyko smiled wanly.

—Anatole Shub, *Los Angeles Times*

PETER USTINOV explains why he reads so much: "If you're going to be the prisoner of your own mind, the least you can do is make sure it's well furnished."

—Leonard Lyons

IN HIS biography of Moshe Dayan, Israeli journalist Shabtai Teveth portrays Israel's defence minister as one of the fastest wits in the Middle East. Stopped on one occasion by a military policeman for driving at 120 k.p.h. when the military speed was 70 k.p.h., Dayan said with a wry smile, "I have only one eye. What do you want me to watch—the speedometer or the road?"

—*Time*

ONE-MAN showman Victor Borge says, "My attitude towards my chosen profession is that if I have caused just one person to wipe a tear of laughter, that's my reward. The rest goes to the government."

—*Parade*



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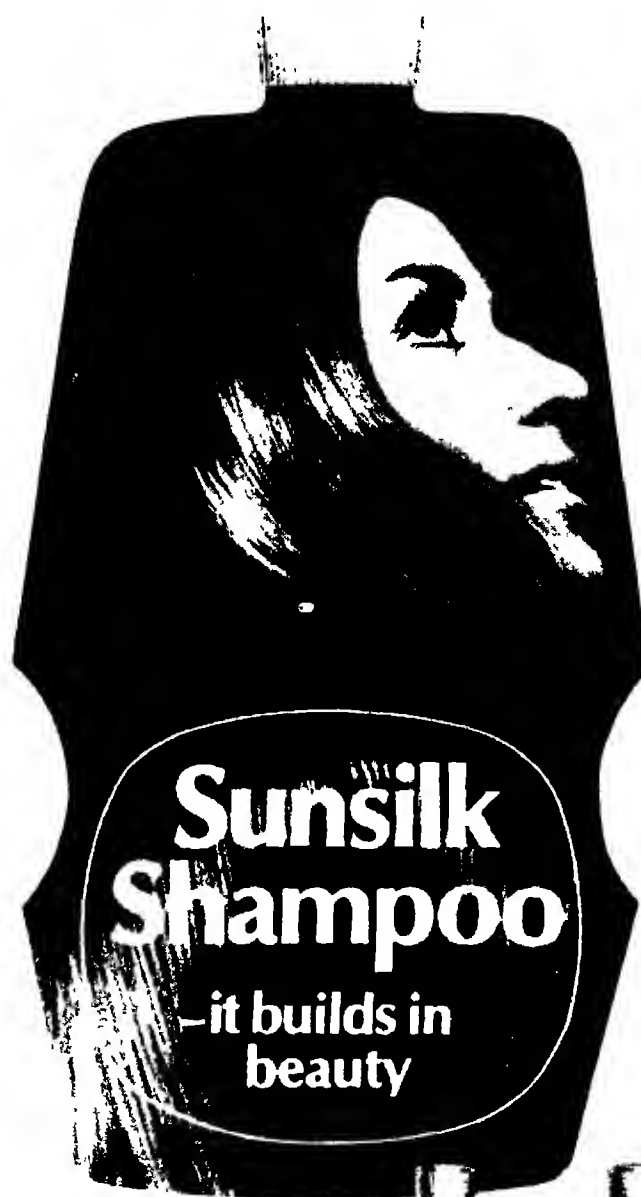


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Five Apollo missions have brought back a wealth of information, but the riddles remain

Our Mysterious Moon

BY EARL UBELL

LUNAR exploration is in the who-cares stage. Ask almost anybody—the moon is passé.

But ask a moon scientist, and you discover that he lives in roisterous, Galilean times: Galilean, because, as with the ascendancy of a sun-centred world, the experts now foresee a great synthesis from the torrent of data brought back by Apollo teams from that dusty, airless world 380,000 kilometres away; roisterous, because the moon probes fight about the meaning of the 273 kilograms of moon rocks and soil, the thousands of photographs and facts detected by lunar experiments. Five moon landings—and no simple story.

Scientists have long believed the moon was a shard of the formation process of the solar system. Without air, water or life, that chunk of rock 3,480 kilometres in diameter must

have remained unchanged over aeons, preserving in its rocks and features the scars of that cataclysmic birth, while on earth the same clues have been obliterated.

Thus Robert Jastrow, who heads Goddard Institute for Space Studies in New York, part of America's National Aeronautics Space Administration, has called the moon the Rosetta Stone of the solar system: one has only to decipher it and out would pour the tale of the creation of the moon, the earth, the solar system and perhaps even the universe itself.

Yet the lunar Rosetta Stone is still a mystery. The moon is more complicated than anyone expected; it is not simply a kind of billiard ball frozen in space and time, as many scientists had believed. Few of the fundamental questions have been answered. Instead, the Apollo

rocks and recordings have spawned a score of mysteries, a few truly breath-taking.

First mystery: Scientists were not prepared for the inconsistent history of the moon that the moon rocks revealed. The big surprise is that the moon had a fairly eventful life from 4.6 to 3.2 thousand million years ago—and has since been still.

Consider: Astronaut Neil Armstrong, the pilot of Apollo 11, steps down on the dusty surface and begins to grab rocks, almost at random. Nearly the first stone he touches turns out to be more than three thousand million years old! This turned out to be young by moon standards. Since then, moon rocks have been dated that are as old as 4.2 thousand million years. On earth, one has to seek out remote African crannies to find a few specimens 3.5 thousand million years of age.

(The pristine condition of the rocks was also striking. Wind, water, snow, life and earthquake conspire here on earth to move things around, shatter them, bury them, melt them. Practically nothing, except something as big as a mountain range, has stayed in roughly its original shape and place for even 100 million years. Yet a rock picked up by astronaut David Scott, pilot of Apollo 15, had been lying at the foot of the lunar Apennine Mountains for 400 million years without moving a millimetre.)

The early activity of the moon

followed by its long quiescence surprised men like Eugene Shoemaker, of the California Institute of Technology. Why should the major lava flows that made the *maria* have occurred between 3.2 and 3.7 thousand million years ago? Why not before or afterwards? And why is the frequency of collision with meteorites not uniform? The moon was a lively target in its youth, but it has been relatively free of bombardment for the last three thousand million years.

Second mystery: The moon has been found to be chemically different at different depths, the upper regions being composed of silicon (sandy, white) minerals and the deeper regions of iron-magnesium (lava-like, dark) minerals. (Seismometers reveal, moreover, that it appears to contain at least three separate layers of rocks.) The puzzle arises only if one believed the moon to have billiard-ball simplicity.

This discovery, which must be counted among the major Apollo findings, represents an intricate chemical analysis of mineral types and their positions on the lunar surface.

Of course, none of the astronauts dug a hole 40 kilometres deep to determine the chemistry down there, but nature provided the "shovel" in the form of incoming meteorites that blasted very deep holes and brought up the underlying rocks. Each of the Apollo landings was therefore placed in

areas where the dug-up rocks would have landed.

Third mystery: The top few kilometres of the moon are radioactive with uranium, thorium and potassium, not so radioactive as to be dangerous to astronauts treading the surface, but enough to produce a brain-twisting conundrum. Remember that these elements spew out atomic particles, which, striking other atoms, produce heat.

If the entire moon had as much radioactivity as the surface, then enough heat would be generated to melt the entire moon, and it would be molten today. Somehow the uranium, potassium and thorium rose towards the surface, where the heat of radioactivity, rather than being trapped in the deep rock, is radiated out into space. How did the radioactivity get to the top?

Fourth mystery: The moon differs chemically from the earth in a very strange way. As a whole, the moon has less iron and more silicon than the earth and fewer of the elements that turn to gas at relatively low temperatures (elements like lead, bismuth, indium and thallium). These chemical differences create very subtle problems for the theorists. For example: if earth and moon were created at the same time, near each other, why has the earth got most of the iron? One possibility is that the earth and moon came into being far from each other—an idea that falls down over the inability of astro-physicists to explain how,

exactly, the moon became a satellite of the earth.

Fifth mystery: Lunar rocks are magnetized—not so strongly that you can pick up a pin with one, but enough to show that, as they cooled down from their molten state, there was a magnetic field present. Question: Where did the magnetic field come from?

If the moon once had a molten core—which would have acted like a huge magnetic dynamo—it may have produced its own relatively strong magnetic field. The trouble is that it is difficult to understand how the moon cooled down so quickly.

On the other hand, if the moon were once so near the earth that the earth's magnetic field could magnetize moon rocks, the two bodies would have been so close that the moon would have broken up under the earth's gravitational pull. Was earth's magnetism once so strong that it could influence the moon over a longer and therefore safer distance?

AND so the mysteries go on and on, as do the puzzlements over the Apollo data. There is, however, a core of ideas about the moon, and although no scientist would agree with all of them, most would find many of them acceptable. Here's the picture I've obtained from consulting 12 lunar authorities.

The age of the moon is 4.6 thousand million years—that long ago,



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OUR MYSTERIOUS MOON

something cataclysmic happened. Many moon men think that the happening must have been the final coalescence of the gigantic dust and gas cloud from which sun, planets and moons were born.

Imagine the surface of the early moon growing in places as hot as an open-hearth steel furnace, and molten rock oozing up from below. As the melt cools, the various minerals crystallize—that is, become solid at different temperatures. The slag, which hardens first, is a white, aluminium, silicon-rich mix called anorthosite—the kind of rock found by astronaut David Scott which came to be dubbed Genesis rock. Rock-dating suggests that the anorthosite is at least four thousand million years old, and Apollo measurements show that many of the mountains of the moon are composed of lighter material in which anorthosite can be found.

Within a few million years of the moon's creation, huge rock chunks went plunging from space into the lunar surface to create vast basins. Then, at intervals between 3.7 and 3.2 thousand million years ago, followed a series of huge meltings, with lava oozing up from deep down to fill the great basins with basalt, thus forming the relatively smooth *maria*. For a while, chunks of rock continued to pock-mark the

moon, shatter the surface rocks and create that fine grey dust that sticks to everything the astronauts touch. Then, gradually, fewer and fewer rocks fell on the moon.

The moon is quiet now. There are no known active volcanoes. Every once in a while its insides give a little seismic rumble, some gas is burped out of the depths, or a small meteorite goes crashing in. What a contrast to the earth, where things are as active as ever both on the surface, with its climate and life, and in the deep interior, with its hot, churning rocks creating lava flows, earthquakes and continental movements. The earth is alive; by comparison, the moon is dead.

But scientists do not have enough data to determine if the moon was born somewhere else in the solar system and in its wanderings fell into the earth's gravity field; or if while the earth was being created, the moon was spun off as if it were a yo-yo on a string; or if it was assembled at the same time as the earth out of much the same materials; or if at creation it was hot and molten throughout.

Thus, nothing about the moon is settled. It turns out that each successive Apollo flight is as productive as the *sum* of the preceding ones. No wonder scientists want to keep Apollo going!

While driving down a busy street, I noticed the car in front had a badly dented boot. Around the dent, in red letters, was the following message:
"Please be careful. It still hurts."

—Patricia Ford

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I Am Jane's Breast

By J. D. RATCLIFF

TODAY many think of me as little more than a cosmetic appurtenance, a prop for the female ego. I am considerably more than that. My real reason for being is that I am capable of baffling, almost miraculous, chemical conversions. I change blood into milk.

I am Jane's breast.* As in most women, the left is slightly larger than the right. At one time, the very survival of the human race depended on me. For Jane's primitive women ancestors, pregnancy was the normal state; baby followed baby. Breasts produced milk almost continuously during the child-bearing years and even *after* those years were over. A granny could put to her breast the infant of a woman

who had died, and soon there would be milk.

In actuality, I am nothing more than a modified, and infinitely complex, sweat gland. For the first few days after Jane was born I functioned. Hormones from her mother stimulated me into producing a few droplets of "witch's milk." (So, when he was born, did John's breasts.) Then the hormones' effect wore off and I went to sleep.

Until Jane was about 12 I was dormant. Then the magic wand of the hormones was waved. Her ovaries matured, and under the prod of their hormones, I started developing. Fat deposits—I am mostly fat—were laid down. I swelled. My nipple grew, and my areola, the halo around it, took on a heavier pigmentation.

My glandular structure is by far

* Jane is 42. Many organs of her 47-year-old husband, John—particularly those possessed by both sexes—have told their stories in past issues of Reader's Digest.

my most interesting component. I have 17 independent milk-producing units. Some women have more, some less. Each is shaped something like a berry bush. The berries are my tens of thousands of microscopic alveoli. The invisible droplets of milk they produce feed into the branching ducts and finally into the main stem. The 17 stems terminate in my nipple. My fat coat provides protection and insulation for these delicate structures. I also contain connective tissue to bind me together; strands attach to Jane's chest wall—a kind of internal bra.

I am under almost total control of hormones. Before menstruation, they make me swell and I become more sensitive. My really big moment came with Jane's first pregnancy, when hormones from the placenta—which links baby and womb—awakened me. The hormone oestrogen stimulated growth of my milk-duct system, and progesterin prodded the development and proliferation of my berry-like alveoli.

Blood vessels, too, expanded their networks. Blue veins on my surface became visible. My weight doubled. As birth neared, I began a big house-cleaning job. Until then, my alveoli had been filled with hard cellular material. It was necessary to dissolve this and make room for milk.

When Jane's baby was born, a new hormone came into production: prolactin, manufactured by

the pituitary gland on the underside of Jane's brain. This remarkable hormone starts my milk on its way.

To begin with, my partner and I secreted a yellowish, watery fluid known as colostrum, but soon we were producing half a litre of milk a day. To achieve this perfect food, we needed many litres of blood circulating through us each day. From the blood my alveoli plucked glucose, or blood sugar, which my enzymes, the most talented of all chemists, changed into lactose and other sugars acceptable to the infant body.

It was the same with amino acids, building blocks for casein and other complex milk proteins which the baby would need for growth and tissue repair. Fats went through other transformations. From the passing blood my alveoli plucked minerals, particularly calcium for bone building, vitamins essential to health, and antibodies to reduce the risk of virus infection and gastro-enteritis in the baby.

Jane noted that my areola darkened and thickened; new lubricating fat glands had grown here to prevent painful cracking of the nipple. My nipple is composed of erectile tissue. When she put her baby to breast, this tissue hardened, providing a better grip for the hungry little mouth. The sucking brought instant response, thanks to an interesting feature of my architecture. Just under my nipple the stalks of my milk trees widen to make a hole

cisterns—instant milk to assuage hunger pangs.

This tiny supply was soon exhausted. But my nipple is richly laced with sensory nerves. Via them, word was communicated to Jane's far-away pituitary. Within 30 seconds the pituitary responded, emptying the hormone oxytocin

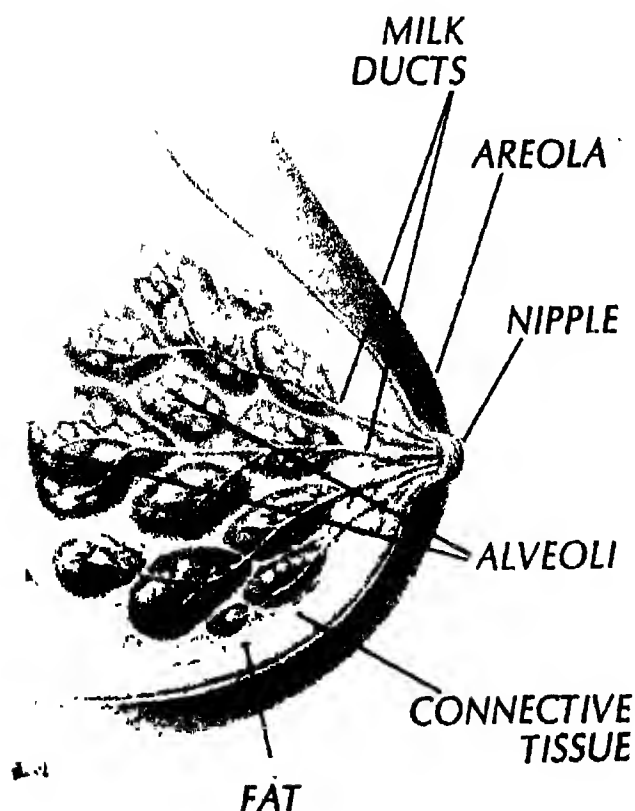
nurse their infants if they can. Cow's milk can be modified to approximate the needs of this stage of life. But it can never be the same.

Nursing has other advantages. It stimulated Jane's womb into rhythmic contraction. This helped shrink it from an envelope large enough to enclose a baby to its normal pear size. Contractions also reduced danger of haemorrhage, and gave Jane a mild sense of sexual pleasure.

At the beginning of lactation, my companion and I produced about half a litre a day—ample for a three-kilo baby. But as the baby grew, so did our production—in some women up to three litres a day. The composition of my milk changed, too. As more calcium was needed for building bone and blood, the calcium content soared.

Finally, after about two months, Jane tired of nursing, though I could have carried on for six months. With no stimulus from a hungry little mouth, my glandular components drifted off to sleep again, and I resumed normal weight.

What ailments am I prey to? Not many. Perhaps the commonest source of worry is breasts that are either too large or too small. Fortunately, Jane has neither of these problems. My usual weight is 170 grammes. Although Jane is 42 years old, I am still firm and erect. Had she not been so blessed, she could have sought help of a surgeon. But if I had been too small, virtually any reputable surgeon would have

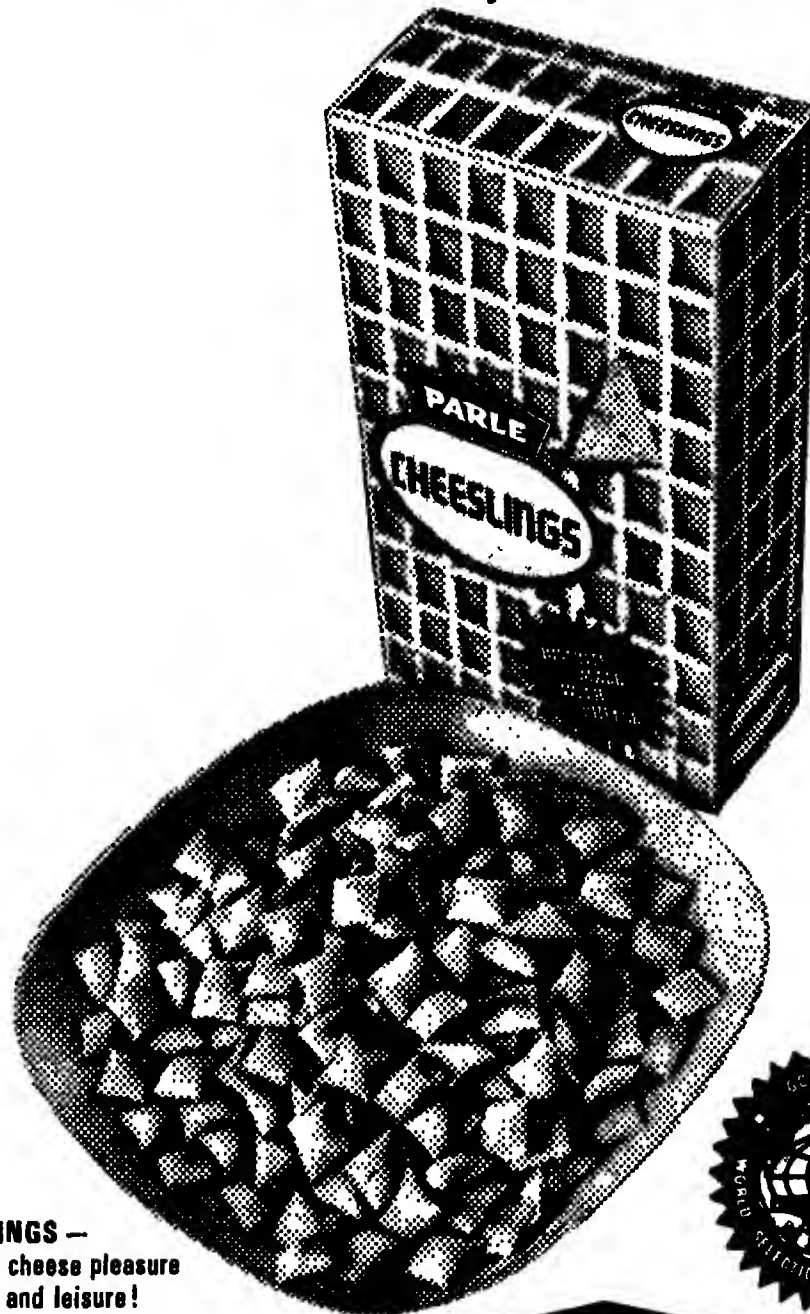


into her bloodstream. Once this substance reached my alveoli, gossamer muscular walls squeezed shut, forcing milk out. From now on, the baby didn't really have to suck—he could simply drink.

The milk that I produce is exactly tailored to infant needs, and that's why we breasts wish women would

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I AM JANE'S BREAST

refused to inject the silicone Jane hears about, or to implant foreign material. Instead, he would have transplanted fat from her buttocks, thighs or abdomen. To correct gross enlargement, excess fat and skin are trimmed away—often many kilos of it. The breast is reshaped, and the nipple transplanted to its proper position over the fourth rib.

The biggest danger I face is cancer but fortunately Jane can do a great deal to avoid this disaster.

She has heard a lot about self-examination of breasts. With a little practice she can become expert at this examination, detecting lumps so small as to be missed by most doctors. She should lie down, a pillow under her left shoulder, and with the flats of three fingers of her right hand examine her left breast thoroughly.

Next, she should put the pillow under her right shoulder and examine the right breast with her left hand. This should be done once a month on some set date—say, two days after menstruation ceases.

Further, she should watch for any

depression in either breast; cancer tissue, because of its effect on other structures of the breast, can cause a slight hollowing. Any twisting of my nipple from normal position is also a signal to watch for.

Should Jane detect a lump, she shouldn't panic. Chances that it is cancerous are less than one in three. But she should see a doctor *instantly*—not wait, as some women do. If cancer is detected early, there is a good chance of a cure.

Jane will soon be going through menopause. Then the things that happened to me at puberty will be reversed. I will lose some but not all of my fat deposits. My glandular structure will wither, and nearly disappear. I may shrink.

That about wraps up my story. I was put on earth for an active, productive life, and it makes me rather sad whenever I am considered primarily as a decoration—however greatly admired. So I am pleased to report that there is a revival of interest in breast-feeding on the part of many of today's young mothers. More power to them!

Feline Fancies

THE cat has a lesson for the modern age. He has no wish to make himself miserable by trying to keep up with the Joneses; like the monks of old, he spends three-quarters of his time in sleep or contemplation, and divides the remaining quarter between eating, hunting and loving, interspersed with short periods of devotion to those who serve him.

Man thinks himself wise; a cat is infinitely man's superior in wisdom, and knows it. Put shortly: "A dog looks up to man, a cat looks down on man."

—Noel Armstrong in a letter to *The Daily Telegraph*

Drama in Real Life

On a raft made of
inner tubes, seven Cubans
willingly faced a sea
of peril

Voyage to Freedom

By JOSEPH BLANK

THE STORM ended during the early-morning darkness.

Antonio Vigo Cancio was afraid to guess how far the wild north wind might have blown them back towards Cuba. It was the sixth day of their attempted escape from the Castro regime, and their raft of six old inner tubes, roped together, was looking flimsier than ever. Then, at dawn, came an appalling sight: in the distance, the seven refugees detected the faint outline of the mountaintops of Cuba.

Antonio tried to think. Nothing was left of their rations but half a dozen portions of water and two tins of condensed milk. Should they go back to Cuba, land at night, try to find water and set out again? Should they chance being caught and clapped in prison? He decided



against it. Veneranda, his wife, read the decision in his eyes. "You men pick up those paddles," she said. "Let's get going."

EARLY in the Cuban revolution, Antonio had hoped that Castro meant democracy. By 1960 he knew that Cuba had only exchanged one dictatorship for another. He became involved in a conspiracy to overthrow the Government. Caught with explosives in his possession, he was sentenced to 30 years in prison. After two attempted escapes had cost him months in solitary confinement, he decided to become a model prisoner in the hope of earning a reduced sentence. In December 1969, after serving nine years, he was let out on parole.

On release, Antonio was given a

job as a lorry driver with a federal agency that employed ex-prisoners and closely observed their behaviour. After working 25 consecutive days, living in a barracks with other parolees, he was permitted to spend five days with his family.

"We can't live like this, always watched," he said to Veneranda. "We have no future here. We must leave." Veneranda agreed.

As a former political prisoner, Antonio wasn't eligible for the daily refugee airlift to the United States. The only alternative was an illegal trip across the Straits of Florida. Antonio began to consider the problem. He decided against attempting to steal or build a boat. That way he risked arrest before he even touched water. He simply had to find another way.

In April 1971, after parking his lorry in his agency's garage one day, Antonio found himself staring at a big inner tube from a lorry tyre. *That* was the answer—a raft composed of inner tubes tied together and enclosed in a sheath stitched from canvas bags. The deflated tubes could be folded and hidden in a small space.

During the next few months, Antonio stole six inner tubes from the garage. Two were in fair condition; the others had to be patched. Then he found four hardwood planks and shaped them into paddles with a matchet. At the same time, his wife collected food and canvas bags.

On August 17, Antonio and



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Isn't this reason enough to give her a break and reduce her unnecessary work load? Get her an AB. After all, the benefit will be yours—entirely.



Antonio stared hard at the freighter. When it ploughed a few hundred metres closer, he spotted the red and white funnels which identified it as a Russian vessel. For a quarter of an hour, the group cowered silently beneath the netting while the freighter slowly disappeared in the distance.

Emergency Measure. That night, Antonio found that food and water were being consumed faster than expected, and he began rationing for all hands except the baby. He also discovered that salt water had killed the torch batteries and ruinously corroded the mirror that he'd brought for flashing signals.

On the afternoon of the fifth day, the sky darkened, and a brisk north wind began stirring up the sea. It was the kind of wind Antonio had secretly dreaded from the outset; the raft was now being inexorably blown back towards Cuba. The waves deepened, lightning flashed, and rain lashed down, ruining the remaining bread and sugar. Hour after hour, the little group merely clung to the raft. And then, with the arrival of dawn, came the disheartening sight of the Cuban mountaintops.

Shortly after the decision against returning to the island for water was made, a good south wind sprang up to push the raft away from Cuba. The men paddled, rested and paddled again. By the end of the day, the water for the adults was finished, though a little remained for the

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baby. Luis was shaking with fever.

With the next dawn came a cloudless blue sky, and soon the sun blazed down on them. They reached into the water for seaweed and chewed on the buds. Sometimes, in a tangled mass of seaweed, they found tiny crustaceans, which they ate. The men and young Tony futilely tried to catch fish with their hands, an empty plastic bag and a piece of mosquito netting.

Antonio tried to conceal his anxiety about his wife. Her bloodshot eyes were sunken, her lips cracked, her blouse torn by the baby's frenzied clawing as he screamed with thirst. The salt water had irritated the infant's skin, and he just scratched himself until the blood ran.

Captain's Faith. On the ninth day, there was a fearful change. Now the baby lay mercifully quiet—too quiet. Periodically, Veneranda shook him, or Antonio reached over to play with his hand. He would open his eyes, gaze vacantly for a moment, then return to sleep.

Except for Antonio, the crew was apathetic; thirst and weakness were destroying them. But Antonio firmly believed they were nearing their destination. Aircraft frequently passed across the sky ten or twelve kilometres to the east, and each time he pleadingly waved his paddle with a nappy tied to it.

Early on the eleventh day, Antonio was alerted by a change in the air. He smelt sweet water;

somewhere to the east it was raining, and the wind was blowing rain clouds in their direction.

"It's going to rain!" he shouted exultantly. "Luis, you and Julio grab a plastic bag and catch water! Everybody turn your face up and catch water in your mouth."

Rain drenched them for about ten minutes. No one spoke. Each was savouring the delicious luxury of fresh water. Veneranda filled a baby bottle for Carlitos and let him drink half of it. He screamed for more, but his mother set aside the remainder, knowing it should be reserved for the end of the day.

During the night, a rainless storm tossed the raft. Fearful of losing a passenger overboard, Antonio shouted, "Everybody wake! Use your paddle. Sit up straight." Then, at about four in the morning, the wind died, the waves grew shallow and stars twinkled. Not too far away, Antonio saw moving lights. "That's a boat!" he cried. More lights peeped out of the night. "Boats! We're going to be saved! Everybody paddle!" The four men screamed for help, but their pleas went unheard.

"It doesn't matter," Antonio reassured them. "There are many boats out there. When day comes, they'll see us. We *must* keep paddling!"

The men somehow found strength

and, as they paddled, suddenly out of the dark-grey dawn, about 200 metres away, loomed the gigantic shape of an American oil tanker, *Key Trader*. It moved slowly towards the refugees as Antonio shouted and waved a nappy. Then, with bells clanging and red lights flashing, the tanker came to a halt.

Antonio and Silvio paddled the raft to within 20 metres of the ship. A voice from the deck shouted in English, "Who are you?"

"We are Cubans," Antonio replied. "We have escaped. We've been at sea for 12 days."

The Pick-Up. A rope dropped from the tanker's deck. Antonio grabbed it and pulled alongside. The others were chattering hoarsely, and trying to embrace one another. In a few minutes, a ladder was lowered from the deck. Veneranda touched her husband and said, "The baby."

He picked up Carlitos and, incredibly, climbed the ladder with his infant clutched in one arm. At the gunwale a sailor took the baby from him. Antonio was helped to the deck, where he collapsed.

Veneranda watched her husband and baby disappear into the safety of the ship. In her numb, near-unconscious condition, she wasn't capable of feeling joy or triumph. "We've made it," she murmured to herself. "We are there."

Bally Hoof!

ONE little girl said her favourite part of ballet dancing was when the ladies got up on their hind legs. —Elizabeth Clarkson Zwart in *Des Moines Tribune*

Army Heroes of the Ulster Bombing Terror

Told for the first time—the story of courage behind the citations to British bomb-disposal experts who are ready to risk death to save lives

By JAMES ATWATER

LAST OCTOBER, two terrorists burst into the lobby of Belfast's Europa Hotel, one waving a sub-machine gun, the other carrying a large wooden box crudely lettered with the warning "IRA." Leaving the box in front of the reception desk, the men hurried back to their waiting car.

Ten minutes later, all 250 guests had been evacuated from the gleaming, 13-storey building. Outside, police were erecting barricades to block off the street and hold back the gathering crowd.

A team of British Army bomb disposal experts, led by Major George Styles, arrived. After a brief evaluation of the situation, one team member, Captain Alan Clouter, prepared to enter the hotel.

He wore a bulky "flak" jacket which could stop a bullet, but gave no protection at all against what could await him in the deserted lobby of the Europa. From past experience, he was sure the bomb was designed not only to wreck the hotel but to kill anyone who tried to disarm it.

Hunched forward by the weight of a portable X-ray machine he carried, Clouter walked into the lobby alone. With every step, he expected the IRA box to disappear in the great white light that would be his last sight. He would not even hear the explosion. Outside the hotel, the rest of the bomb disposal team watched Clouter intently. If the bomb exploded, their observations of what he was doing could save the

life of the man who tackled the next bomb.

Moving on tiptoe, Clouter took a first set of X-ray pictures, then quickly rejoined his companions outside. They drove to a radiological laboratory for the X-rays to be developed, then returned for further pictures until they had a complete set, mounted on display consoles. The pictures showed no timelock, but did reveal a mare's nest of wires, intended to fool anyone hoping to disarm the bomb, and incorporating two ultra-sensitive microswitches—one that would explode the charge if the box was lifted, the other when the lid was removed. A few weeks previously, at Castlerobin, 16 kilometres south-west of Belfast, a similar type of bomb had killed a member of the squad, Captain David Stewardson.

Carefully, the men examined the X-ray pictures, trying to decide which wires were decoys and which were connected to the microswitches. Then Major Styles, who had previously made a special study of the Castlerobin-type bomb, drew up the plan for neutralization and removal, and the squad drove back to the Europa.

Gently, very gently, members of the squad used ropes to ease the box on to a thin sledge and slid it along a smooth track of sand out through the lobby and into the street. There, nine hours after the bomb was planted, they skilfully blew the top off the box and one man leaned

down and rendered the bomb harmless by snipping a wire.

The Europa's grateful management opened champagne to celebrate one of the more spectacular successes of the British Army's bomb disposal experts in Northern Ireland. For disarming this and another bomb at the Europa, Major Styles was given the George Cross, Britain's highest "peacetime" award for gallantry; Captain Alan Clouter was later awarded the George Medal for deeds of valour in Northern Ireland.

Not all such missions ended with champagne and medals. Between August 1969, when the IRA bombing wave began, and June 1972, the terrorists planted 2,543 bombs in Ulster, killing 110 people, injuring or maiming some 5,000 others and destroying property worth an estimated Rs. 114 crores. After internment was introduced in August 1971, the explosions intensified, going off at the rate of four a day. On one afternoon last July, 27 bombs exploded in less than two hours.

Life Savers. By gambling their lives, the Army experts—their names and unit strengths are security secrets and only men who were killed or cited for bravery can be identified—were able to reach about one-third of the bombs before they exploded. About four out of five of these were successfully neutralized, thus significantly reducing the damage caused by the terrorists. Five bomb squad members, however, have died.

Until towards the end of last

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September

year, IRA bombs seldom weighed over nine kilograms; later some were up to 200 kilograms—so big they had to be carried and detonated in a car or van. One ripped through three rows of houses, tearing off roofs, starting fires, and sending shards of broken glass and metal whizzing through the air like shrapnel. Another turned a Belfast street into a horror of blood. Six people died and 146 were injured—many maimed for life. Surgeons amputated shredded arms and legs on the pavement.

Suspicion clutched the people of Ulster, who automatically look for the strange parked car, the package left in an unexpected place. Their principal defenders, the officers and NCOs of the Royal Army Ordnance Corps, who went out to disarm the IRA bombs, usually handle shells and ammunition in peacetime. But after taking a special, three-week course on IRA bombs, they quickly adjusted to their new responsibility. They acquired what they call the “feel” for explosives.

“Disarming a bomb is like playing Russian roulette,” said Major Bernard Calladene after one mission, “except that you don’t have your own finger on the trigger.” Two weeks later, called out to investigate a suspicious car, Major Calladene waved everyone back and was walking alone towards the vehicle when it exploded. He died two hours later in hospital.

One of the basic explosives used

1972

by the IRA—gelignite—is simple to handle, powerful, and relatively easy to buy or steal, since it is widely employed for commercial blasting. The other was a mixture of ammonium nitrate and sodium chlorate, both of which were, until recently, freely on sale for agricultural use.

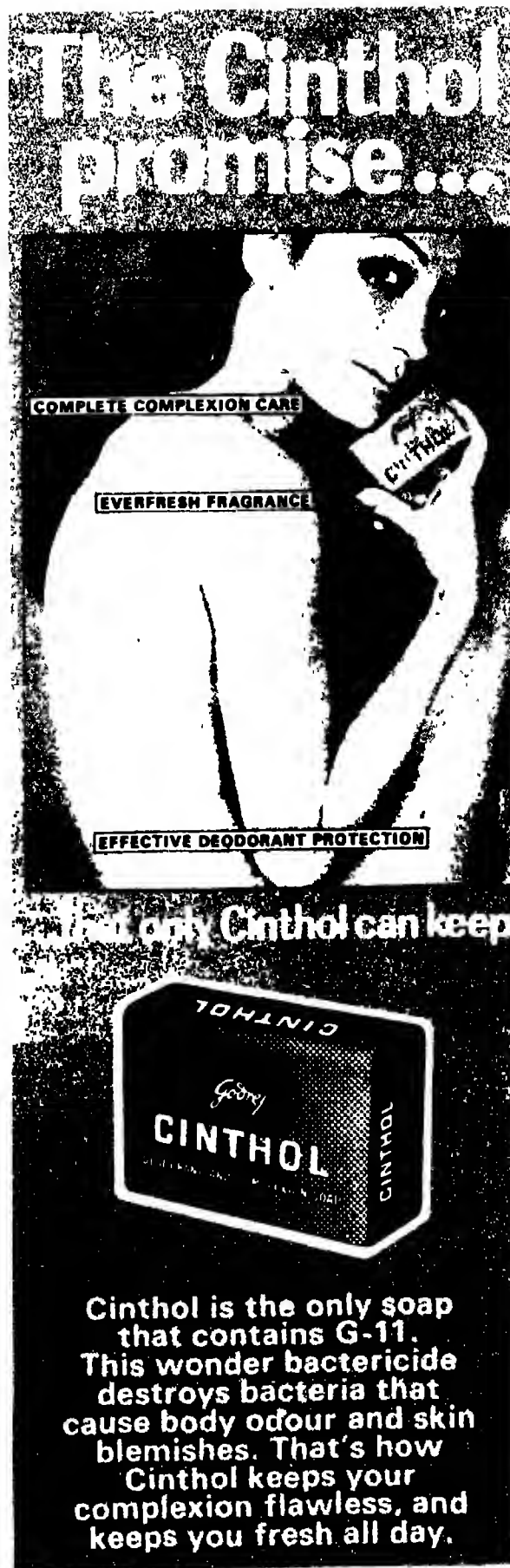
A time-bomb can be made with a standard alarm clock or a spring-operated clothes peg, but bombs designed to kill the man who works on them as well as destroy a target have to be more sophisticated—like one that was found in a canvas hold-all. It had not only a timing device, but also switches and circuitry to explode the sticks of gelignite if the bag were unzipped, lifted or cut, plus a final trigger tucked down in the gelignite that would have touched off the lot when the top sticks were removed.

Unfortunately there is no sure method of exploding all bombs from a distance, nor is there any practical way of muffling the force of the blast. Detonations are far too violent to be contained by a portable cover.

"What it comes down to," said one of the men, "is that eventually someone has to go to the bomb." When they are actually crouched over a box that might explode, the men have no fear. Their concentration is so complete that they can actually feel the sense of control sweep over their bodies. Every detail of the bomb burns itself into their minds: the writing on the box,

163

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Interpub/GSC-5A/;

the texture of the wood, even the pattern of the nail holes.

All that is when they are at the bomb. Until then, they are as afraid as any man would be. Why do they go? A sense of duty, they say. "You're *expected* to go," explains one member of the squad. Said Major Calladene shortly before his death: "Sometimes you go because you are a coward. You're afraid to show fear out there in the street in front of everybody."

This explanation is brushed aside by a seasoned paratroop colonel who had watched the bomb disarmers at work. "I cannot begin to describe the bravery of these men," he says simply.

Among the dramatic missions of the bomb squad, these were typical.

- A bomb is left on the front steps of a police station. From its appearance, an army captain is convinced that it has a timer. He runs up the steps, ties a rope to the bomb, backs off and pulls. The rope breaks. The captain makes a second trip to the steps, ties a knot in the rope and drags the bomb safely away from the building. Seconds later, it explodes.

- Terrorists hijack a large, articulated tanker three-quarters full of oil, place a seven-kilogram gelignite bomb under it, and leave it at a crowded intersection. A sergeant crawls under the tanker and works

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for four hours to disarm the bomb.

• An army warrant officer, answering a call to a building, finds what appears to be a series of petrol bombs—several bottles with fuses taped to their sides. Hurrying from one to another, he sees they are all dummies. Suddenly he realizes that they must have been planted to hold his attention while a hidden time-bomb ticks through its cycle. He searches the building, finds the bomb and rips out the circuitry two minutes before it is set to go off.

Bomb disposal men have been stationed wherever there was action in Northern Ireland. Their routine, as they manned bases around the clock—on duty for 24 hours, on

call for 24 hours, then free for 24 hours. When I was at their Belfast base—a wooden shed that looks like the office at a building site—I watched them await the summons to action. This was the scene:

They slump in battered chairs, or play cards, or stare at a television set. There is no air of bravado. Despite the variety of ranks and personalities, the men seem to belong to a family. They treat each other with quiet respect.

The duty officer's telephone rings. A suspicious-looking black car has been parked on a corner in a Protestant neighbourhood for four hours.

Suddenly the room is alive with men pulling on "flak" jackets. Some-

I think you should buy a
neutral colour so that
your suit can be both
formal and informal
when you want it to be.

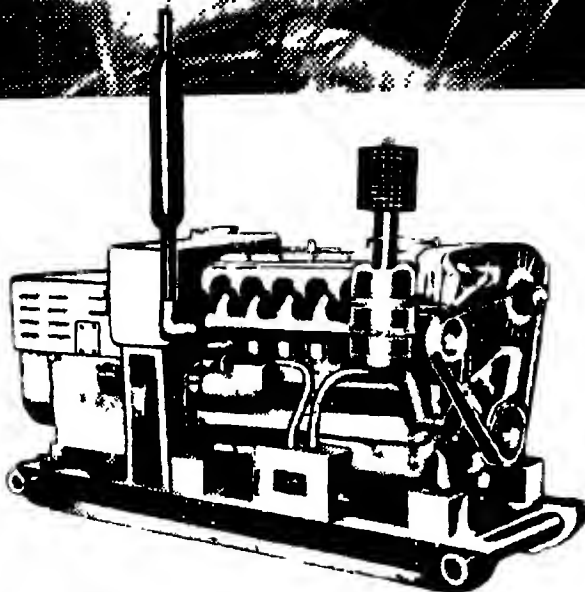


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ARMY HEROES OF THE ULSTER BOMBING TERROR

one grabs the bright red wooden box that contains the materials used to blow open bombs. The men pile into a green armoured vehicle. Four riflemen trot up and climb into a Land-Rover. Klaxons wailing, the two vehicles career through the streets of Belfast, slowing only slightly at red lights. When congestion stops them for a moment, the driver of the Land-Rover hunches his shoulders and swears softly. A stationary vehicle is an easy target for a sniper.

The "suspicious" car turns out to be harmless; it has been parked by a woman from a near-by house. The bomb squad told me that their day might be filled answering false alarms such as this, or with dismantling a decoy "bomb"—a box packed with rubbish and left in a department store. But then the hours of routine could turn into moments of terror. One night, three sergeants answered a call to investigate a car in a Belfast main street.

Into Action. Suspecting a time-clock, the sergeants let the car sit for a while. When nothing happened, one took the end of a coil of wire in one hand and an explosive charge in the other. Then he ran to the car. With quick, deft movements, he fastened the wire and the charge against the lid of the boot by means of sticky tape. Seconds later, he was running back to safety.

The men fired the charge, the boot swung open—but no bomb was in sight. One man made another

dash to the car and discovered a half-hidden box on the rear seat. He attached a line to the box and pulled it to the floor. Nothing happened. If the box was a bomb, it apparently had no anti-handling devices.

Two of the sergeants went back to the car. There was a blinding flash and a blast that rocked the neighbourhood. Staff Sergeant Chris Cracknell, 29, and Sergeant Anthony Butcher, 24, died instantly. They were well-trained, meticulous men, and later no one could explain why the charge went off. Timers sometimes stop and then start ticking again. Said the third sergeant, who escaped unhurt: "You may not need good luck to survive in this business. But you can't cope with bad luck."

By having the courage and skill to tackle the bombs, the bomb squads of the British Army forced the IRA to develop more complex bombs, which were very dangerous to handle. The results were frequently disastrous for the IRA. The Army estimates that at least 33 terrorists were blown up by their own explosives. Said George Styles early this year: "The war between us and the bombers is a contest of skill and ingenuity; ultimately we shall succeed because every design we defeat improves our skills and reduces the options open to the terrorists."

Meanwhile, the bomb disposal experts went about their work knowing that they were prime targets for

READER'S DIGEST

the IRA, who on occasion timed a second bomb to go off in a building about 20 minutes after the first—just when the men might be pushing into the wreckage. Another favourite IRA tactic was to leave snipers behind to shoot at the dismantlers. In pro-IRA neighbourhoods, the crowds always seemed to know when the sniping would start. "You watch the people very closely," said one sergeant. "If they are running away from you, you're going to be shot at. If they are running towards you, you're going to be stoned."

The men who disarm bombs do not talk easily about their jobs, let alone their courage. "It's my wife who deserves a medal," commented George Styles. "It's much harder to sit at home and wait." Mary Styles, a shy, attractive woman, learned to live with the fact that her husband,

the father of her three children, was doing a job that made them thankful each time he returned home safely.

But if the bomb squads are shy of publicity, the Army can speak for them, knowing that without their skill and bravery, more lives would have been lost, more victims crippled, more buildings reduced to smoking ruins. The citation awarding the George Cross to Major Styles—recently promoted to lieutenant-colonel—states that he "displayed a calm resolution in control, a degree of technical skill and personal bravery in circumstances of extreme danger far beyond the call of duty."

As Styles himself is quick to point out, the same can be said of any man in the unit who forced himself to take the long, lonely walk to a bomb that could explode in his face.

Down to Earth

I SAT down to supper after a particularly hard day's work. I had some important matters to discuss with my wife, but it was almost impossible to talk because the children were making such a noise. Finally I could take no more. I thumped my fist on the table and yelled, "Quiet! When I sit down at the head of this table, I'm God! And I want respect and silence!"

For a moment you could have heard the cat purr. Then a bored young voice said, "Well, God, pass the potatoes please!"

—H. Gordon Green, *Good-bye, Little Town* (McClelland and Stewart, Toronto)

Mother's Help

A NEW hotel in France's Haute-Savoie has made life easy for holiday-making mothers who enjoy the services of five nurseries, a nurse (with a supply of 20,000 nappies), a feeding-room, a dormitory and a playroom. They can go out without a worry in the evening, thanks to an electronic baby-sitter installed in the children's bedrooms: microphones transform baby's slightest whimper into a light signal in a surveillance room. A "palpating micro" under the mattress registers his respiration and detects signs of restlessness.

—*France-Soir*, Paris

BOOK CHOICE



Jonathan Livingston Seagull

from the book by
RICHARD BACH

BOOK CHOICE

Jonathan Livingston Seagull

from the book by
RICHARD BACH

Richard Bach is a pilot who finds in flying a constantly renewable source of mystery. One night about ten years ago, he was walking alone in California when he heard a voice distinctly say, "Jonathan Livingston Seagull."

Returning home, he began to write this story about a seagull who not only talks but has some exceedingly unusual adventures. The tale came to him unbidden, but after about ten pages the inspiration ceased: the story had no ending.

A few years later, Bach awoke one night with the impulse to write again. This time the story was finished. Published in the U.S. in 1970, it went almost unnoticed by reviewers. But like Jonathan himself, the book was a soaring success. When it finally appeared on U.S. best-seller lists in 1972, it was rated, inexplicably, as non-fiction. Which proves, perhaps, that there is more "truth" in Jonathan than in many true stories."

THE COMPLETE "JONATHAN LIVINGSTON SEAGULL," © 1970 BY RICHARD D. BACH, IS PUBLISHED,
WITH MORE THAN 50 PAGES OF PHOTOGRAPHS, BY TURNSTONE PRESS LTD., LONDON

IT WAS morning, and the sun sparkled gold across the ripples of a gentle sea. One and a half kilometres from shore a fishing boat chummed the water, and the word for Breakfast Flock flashed through the air, till a crowd of a thousand seagulls came to fight for bits of food.

But out by himself, beyond boat and shore, Jonathan Livingston Seagull was practising. Thirty metres in the sky he lowered his webbed feet, lifted his beak and strained to hold a painful twisting curve through his wings. The curve meant that he would fly slowly, and now he slowed until the wind was a whisper in his face. He narrowed his eyes in fierce concentration, held his breath, forced one . . . single . . . more . . . bit of curve. Then his feathers ruffled, he stalled and fell.

Seagulls, as you know, never falter, never stall. To stall in the air is for them disgrace and dishonour.

But Jonathan Livingston Seagull, unashamed, stretching his wings again in that trembling hard curve—slowing, slowing and stalling once more—was no ordinary bird.

Most gulls don't bother to learn more than the simplest facts of flight—how to get from shore to food and back again. For most gulls, it is not flying that matters, but eating. For this gull, though, it was not eating that mattered, but flight. More than anything else, Jonathan Livingston Seagull loved to fly.

This kind of thinking, he found, is not the way to make oneself

popular with other birds. Even his parents were dismayed as Jonathan spent days alone, making hundreds of low-level glides, experimenting.

He didn't know why, for instance, but when he flew at altitudes less than half his wing-span above the water, he could stay in the air longer, with less effort. His glides ended not with the usual feet-down splash into the sea, but with a long flat wake as he touched the surface with his feet tightly streamlined against his body. When he began sliding in to feet-up landings on the beach, then pacing the length of his slide in the sand, his parents were very dismayed indeed.

"Why, Jon, *why*?" his mother asked. "Why is it so hard to be like the rest of the flock? Why don't you *eat*? Son, you're bone and feathers!"

"I don't mind being bone and feathers, Mum. I just want to know what I can do in the air and what I can't, that's all. I just want to know."

"Look here, Jonathan," said his father, not unkindly. "Winter isn't far away. Boats will be few, and the surface fish will be swimming deep. If you must study, then study food, and how to get it."

Jonathan nodded obediently. For the next few days he tried to behave like the other gulls; he really tried, screeching and fighting with the Flock around the piers and fishing boats, diving on scraps of fish and bread. But he couldn't make it work.

It's all so pointless, he thought,

deliberately dropping a hard-won anchovy to a hungry old gull chasing him. I could be spending all this time learning to fly. There's so much to learn!

It wasn't long before Jonathan Gull was off by himself again, far out at sea, hungry, happy, learning. The subject was speed, and in a week's practice he learned more about speed than the fastest gull alive.

From 300 metres, flapping his wings as hard as he could, he pushed over into a blazing dive towards the waves, and learned why seagulls don't make blazing steep power dives. In just six seconds he was doing 110 k.p.h., the speed at which one's wing goes unstable on the upstroke.

Time after time it happened. Careful as he was, working at the very peak of his ability, he lost control at high speed.

Climb to 300 metres. Full power straight ahead, then push over, flapping, to a vertical dive. Then, every time, his left wing stalled on an upstroke, he'd roll violently left, stall his right wing recovering and flick like fire into a wild, tumbling spin. Ten times he tried, and each time, as he passed through 110 k.p.h., he burst into a churning mass of feathers, out of control, crashing down into the water.

The key, he thought at last, dripping wet, must be to hold the wings still at high speeds—to flap up to 80 and then hold the wings still.

From 600 metres he tried again, rolling into his dive, beak straight down, wings full out and stable from the moment he passed 80 k.p.h. It took tremendous strength, but it worked. In ten seconds he had blurred through 140 k.p.h. Jonathan had set a world speed record for seagulls!

But victory was short-lived. The instant he began his pull-out, the instant he changed the angle of his wings, he snapped into that same uncontrolled disaster, and at 140 k.p.h. it hit him like dynamite. Jonathan Seagull exploded in mid-air and smashed down into a brick-hard sea.

When he came to, it was well after dark, and he floated in moonlight on the surface of the ocean. His wings were ragged bars of lead, but the weight of failure was even heavier on his back. He wished, feebly, that the weight could just be enough to drag him gently down to the bottom and end it all.

As he sank low in the water, a hollow voice sounded within him. There's no way round it. I am a seagull. I am limited by my nature. If I were meant to learn so much about flying, I'd have charts for brains. If I were meant to fly at speed, I'd have a falcon's short wings, and live on mice instead of fish. My father was right. I must fly home to the Flock and be content as I am, a poor limited seagull.

The voice faded, and Jonathan agreed. The place for a seagull at

night is on shore. From this moment forth, he vowed, he would be a normal gull. It would make everyone happier.

Break-through

HE PUSHED wearily away from the dark water and flew towards the land, grateful for what he had learnt about work-saving, low altitude flying.

But no, he thought. I am done with the way I was; I am done with everything I learned. I am a seagull like every other seagull, and I will fly like one. So he climbed painfully to 30 metres and flapped his wings harder, pressing for shore.

He felt better for his decision to be just another one of the flock. There would be no ties now to the force that had driven him to learn; there would be no more challenge and no more failure. And it was pretty, just to stop thinking and fly through the dark towards the lights above the beach.

Dark! The hollow voice cracked in alarm. *Seagulls never fly in the dark!*

Jonathan was not alert to listen. It's pretty, he thought. The moon and the lights twinkling on the water, throwing out little beacon-trails through the night, and all so peaceful and still . . .

Get down! Seagulls never fly in the dark! If you were meant to fly in the dark, you'd have the eyes of an owl! You'd have charts for brains! You'd have a falcon's short

wings! There in the night, 30 metres in the air, Jonathan Livingston Seagull blinked. His pain, his resolutions, vanished.

A falcon's short wings!

That's the answer! What a fool I've been! All I need is a tiny little wing; all I need is to fold most of my wings and fly on just the tips alone. *Short wings!*

He climbed 600 metres above the black sea and, without a thought of failure and death, brought his forewings tightly into his body, left only the narrow swept daggers of his wingtips extended into the wind, and fell into a vertical dive.

The wind was a monster roar at his head. One hundred and ten k.p.h., 140, 190 and faster still. The wing strain, now at 220 k.p.h., wasn't nearly as hard as it had been before at 110, and with a faint twist of his wingtips he eased out of the dive and shot above the waves, a grey cannonball under the moon.

He closed his eyes to slits against the wind and rejoiced. Two hundred and twenty k.p.h.! Under control! If I dive from 1,500 metres instead of 600, I wonder how fast . . .

His vows of a moment before were forgotten, swept away in that great swift wind. Yet he felt guiltless, breaking the promises he had made himself. Such promises are only for the gulls that accept the ordinary. One who has touched excellence in his learning has no need of that kind of promise.

By sunrise, Jonathan Gull was

practising again. From 1,500 metres the fishing boats were specks in the flat blue water and the Breakfast Flock was a faint cloud of dust motes, circling.

He was alive, trembling with delight, proud that his fear was under control. Then without ceremony he hugged in his forewings, extended his short, angled wingtips, and plunged directly towards the sea. By the time he passed 1,200 metres, he had reached terminal velocity; the wind was a solid beating wall of sound against which he could move no faster. He was flying straight down, at 344 k.p.h. He swallowed, knowing that if his wings unfolded he'd be blown into a million tiny shreds of seagull. But the speed was power, and the speed was joy, and the speed was pure beauty.

He began his pull-out at 300 metres, wingtips thudding and blurring in that gigantic wind, the boat and the crowd of gulls tilting and growing meteor-fast, directly in his path.

He couldn't stop; he didn't know yet how to turn at this speed. Collision would be instant death. And so he shut his eyes.

It happened that morning, then, just after sunrise, that Jonathan Livingston Seagull fired directly through the centre of the Breakfast Flock, ticking off 341 k.p.h., eyes closed, in a great roaring shriek of wind and feathers. The Gull of Fortune smiled upon him this once, and no one was killed.

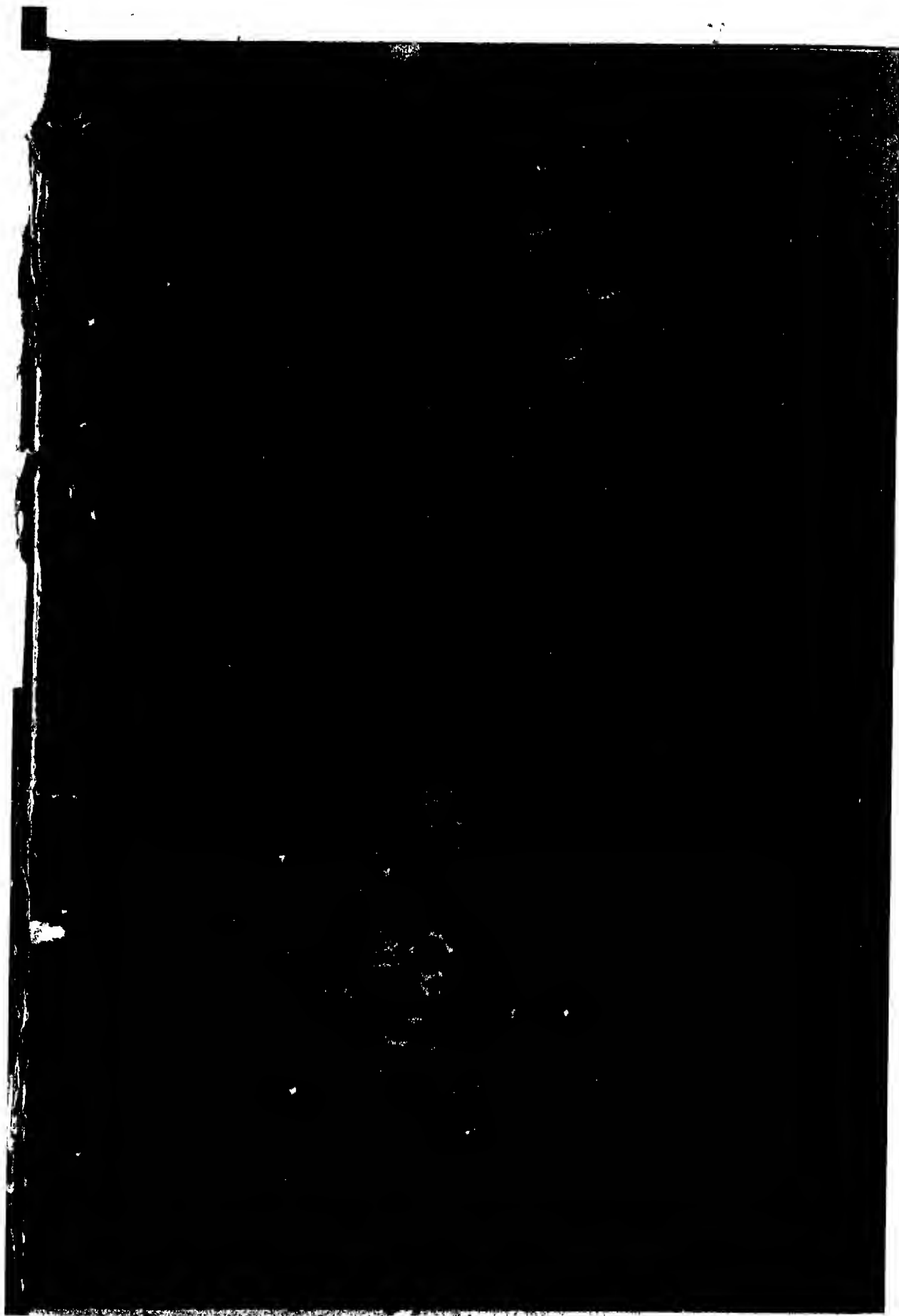
By the time he had pulled his beak straight up into the sky, he was still scorching along at 256 k.p.h. When he had slowed to 30 and stretched his wings again at last, the boat was a crumb on the sea, 1,200 metres below.

Terminal velocity! A seagull at 344 k.p.h. It was a break-through, the greatest single moment in the history of the Flock, and in that moment a new age opened for Jonathan Gull. Flying out to his lonely practice area, folding his wings for a dive from 2,400 metres, he set himself at once to discover how to turn.

A single wingtip feather, he found, moved a fraction, gives a smooth, sweeping curve at tremendous speed. Before he learned this, however, he found that moving more than one feather at that speed will spin you like a rifle ball . . . and Jonathan had flown the first aerobatics of any seagull on earth.

He spared no time that day for talk with other gulls, but flew on until past sunset. He discovered the loop, the slow-roll, the point-roll, the inverted spin, the gull-bunt, the pin-wheel.

When he joined the Flock on the beach, it was full night. He was dizzy and terribly tired. Yet in delight he flew a loop to landing, with a snap roll just before touch-down. When they hear of it, he thought, of the Break-through, they'll be wild with joy. How much more there is now to living! Instead of our drab slogging forth and back to the



fishing boats, there's a reason to life! We can lift ourselves out of ignorance; we can find ourselves as creatures of excellence and intelligence and skill. We can be free! *We can learn to fly!*

The years ahead hummed and glowed with promise.

The gulls were flocked into the Council Gathering when he landed, and apparently had been so flocked for some time. They were, in fact, waiting.

"Jonathan Livingston Seagull! Stand to Centre!" The Elder's words sounded in a voice of highest ceremony. Stand to Centre meant only great shame or great honour. Stand to Centre for Honour was the way the gulls' foremost leaders were marked. Of course, he thought—the Breakfast Flock saw the Break-through this morning! But I want no honours. I have no wish to be leader. I want only to share what I've found, to show those horizons ahead for us all. He stepped forward.

"Jonathan Livingston Seagull," said the Elder. "Stand to Centre for Shame in the sight of your fellow gulls!"

It felt like being hit with a board. Jonathan's knees went weak, his feathers sagged, there was roaring in his ears. Centred for shame? Impossible! The Break-through! They can't understand! They're wrong!

"... for his reckless irresponsibility," the solemn voice intoned, "violating the dignity and tradition of the Gull Family...."

To be centred for shame meant that he would be cast out of gull society banished to a solitary life on the Far Cliffs.

"... one day, Jonathan Livingston Seagull, you shall learn that irresponsibility does not pay. Life is the unknown and the unknowable, except that we are put into this world to eat, to stay alive as long as we possibly can."

A seagull never speaks to the Council Flock, but it was Jonathan's voice raised. "Irresponsibility? My brothers!" he cried. "Who is more responsible than a gull who finds and follows a higher purpose for life? For a thousand years we have scrabbled after fish heads, but now we have a reason to live—to learn, to discover, to be free! Give me one chance, let me show you what I've found."

The Flock might as well have been stone.

"The Brotherhood is broken," the gulls intoned together. With one accord they solemnly closed their ears and turned their backs on him.

Outcast

JONATHAN spent the rest of his days alone, but he flew out way beyond the Far Cliffs. His one sorrow was not solitude. It was that other gulls refused to believe the glory of flight that awaited them; they refused to open their eyes and see.

He learned more each day. He learned that a streamlined, high-speed dive could bring him to find

the rare and tasty fish that schooled three metres below the surface of the ocean: he no longer needed fishing boats and stale bread for survival. He learned to sleep in the air, setting a course at night across the offshore wind, covering 150 kilometres from sunset to sunrise. With the same inner control, he flew through heavy fogs and climbed above them into dazzling clear skies—in the very times when every other gull stood on the ground, knowing nothing but mist and rain. He learned to ride the high winds far inland, to dine there on delicate insects.

What he had once hoped for for the Flock, he now gained for himself alone; he learned to fly, and was not sorry for the price he had paid. Jonathan discovered that boredom and fear and anger are the reasons that a gull's life is so short, and with these gone from his thought, he lived a long, fine life indeed.

They came in the evening, then, and found Jonathan gliding peaceful and alone through his beloved sky. The two gulls that appeared at his wings were as pure as starlight, and the glow from them was gentle and friendly in the high night air.

Without a word, Jonathan put them to his test—a test that no gull had ever passed. He twisted his wings, slowed to a single kilometre per hour above stalling speed. The two radiant birds slowed with him, smoothly, locked in position. They knew about slow-flying.

He folded his wings, and dropped

in a dive to 300 k.p.h. They dropped with him, streaking down in flawless formation.

At last he turned that speed straight up into a long vertical slow-roll. They rolled with him, smiling.

He recovered to level flight and was quiet for a time before he spoke. "Very well," he said. "Who are you?"

"We're from your Flock, Jonathan. We are your brothers. We've come to take you higher, to take you home."

"Home I have none. Flock I have none. I am Outcast. And we fly now at the peak of the Great Mountain Wind. I can lift this old body no higher."

"But you can, Jonathan. For you have learnt. One school is finished, and the time has come for another to begin."

As it had shone across him all his life, so understanding lighted that moment for Jonathan Seagull. They were right. He *could* fly higher, and it *was* time to go home.

He gave one last long look across the sky, across that magnificent silver land where he had learnt so much.

"I'm ready," he said at last.

And Jonathan Livingston Seagull rose with the two star-bright gulls to disappear into a perfect dark sky.

Perfection

So THIS is heaven, he thought, and he had to smile at himself. It was hardly respectful to analyse heaven

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JONATHAN LIVINGSTON SEAGULL

in the very moment that one flies up to enter it.

As he came from Earth now, above the clouds and in close formation with the two brilliant gulls, he saw that his own body was growing as bright as theirs. True, the same young Jonathan Seagull was there that had always lived behind his golden eyes, but the outer form had changed.

It felt like a seagull body, but already it flew far better than his old one had ever flown. Why, with half the effort, he thought, I'll get twice the speed, twice the performance of my best days on Earth!

His feathers glowed brilliant white now, and his wings were smooth and perfect as sheets of polished silver. He began, delightedly, to learn about them, to press power into these new wings.

At 400 k.p.h. he felt that he was nearing his level-flight maximum speed. At 439 he thought he was flying as fast as he could fly, and he was faintly disappointed. There was a limit to how much the new body would do, and though it was much faster than his old level-flight record, it was still a limit that would take great effort to crack. In heaven, he thought, there should be no limits.

The clouds broke apart. His escorts called, "Happy landings, Jonathan," and vanished into thin air.

He was flying over a sea, towards a jagged shoreline. A few seagulls were working the updraughts on the

cliffs. Away off to the north, at the horizon itself, flew a few others.

New sights, new thoughts, new questions. Why so few gulls? Heaven should be *flocked* with gulls! And why am I so tired, all at once? Gulls in heaven are never supposed to be tired, or to sleep.

Where had he heard that? The memory of his life on Earth was falling away. Earth had been a place where he had learnt much, of course, but the details were blurred—something about fighting for food, and being Outcast.

The dozen gulls by the shoreline came to meet him, none saying a word. He felt only that he was welcome and that this was home. He turned to land on the beach, beating his wings to stop a few centimetres in the air, then dropping lightly to the sand.

The other gulls landed, too, but not one of them so much as flapped a feather. They swung into the wind, bright wings outstretched; then, somehow, they changed the curve of their feathers until they had stopped in the same instant their feet touched the ground. It was beautiful control, but now Jonathan was just too tired to try it. Standing there on the beach, still without a word spoken, he was asleep.

In the days that followed, Jonathan saw that there was as much to learn about flight in this place as there had been in the life behind him. But with a difference. Here were gulls who thought as he

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thought. For each of them, the most important thing in living was to reach out and touch perfection in that which they most loved to do, and that was to fly. They were magnificent birds, and they spent hour after hour every day practising flight, testing advanced aeronautics.

For a long time Jonathan forgot about the world that he had come from, that place where the Flock lived with its eyes tightly shut to the joy of flight. But now and then, just for a moment, he remembered.

He remembered it one morning when he was out with his instructor, while they rested on the beach after a session of folded-wing snap rolls. "Where is everybody, Sullivan?" he

asked silently, quite at home now with the easy telepathy that these gulls used instead of screams and gracks. "Why aren't there more of us here? Why, where I came from, there were..."

"... thousands and thousands of gulls. I know." Sullivan shook his head. "The only answer I can see, Jonathan, is that you are pretty well a one-in-a-million bird. Most of us came along slowly. We went from one world into another that was almost exactly like it, forgetting right away where we had come from, not caring where we were headed, living for the moment.

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before we even got the first idea that there is more to life than eating or fighting, or power in the Flock? A thousand lives, Jon, ten thousand! And then another hundred lives until we began to learn that there is such a thing as perfection, and another hundred to get the idea that our purpose for living is to find that perfection and show it forth. The same rule holds for us now: we choose our next world through what we learn here. Learn nothing, and the next world is the same as this one, all the same limitations and lead weights to overcome."

He stretched his wings and turned to face the wind. "But you, Jon," he said, "learned so much at one time that you didn't have to go through a thousand lives to reach this one."

In a moment they were airborne again, practising. The formation point-rolls were difficult, for through the inverted half Jonathan had to think upside down, reversing the curve of his wing, and reversing it exactly in harmony with his instructor's.

"Let's try it again," Sullivan said over and over. "Let's try it again." Then, finally, "Good." And they began practising outside loops.

One evening the gulls that were not night-flying stood together on the sand, thinking. Jonathan took all his courage in hand and walked to the Elder Gull who, it was said, was soon to be moving "beyond this world."

"Chiang . . ." he said, a little nervously.

The old seagull looked at him kindly. "Yes, my son?" Instead of being enfeebled by age, the Elder had been empowered by it; he could outfly any gull in the Flock, and he had learnt skills that the others were only gradually coming to know.

"Chiang, this world isn't heaven at all, is it?"

The Elder smiled in the moonlight. "You are learning again, Jonathan Seagull," he said.

"Well, what happens from here? Where are we going? Is there no such place as heaven?"

"No, Jonathan, there is no such place. Heaven is not a place, and it is not a time. Heaven is being perfect." He was silent for a moment. "You are a very fast flier, aren't you?"

"I . . . I enjoy speed," Jonathan said, taken aback but proud that the Elder had noticed.

"You will begin to touch heaven, Jonathan, in the moment that you touch perfect speed. And that isn't flying a thousand kilometres an hour, or a million, or flying at the speed of light. Because any number is a limit, and perfection doesn't have limits. Perfect speed, my son, is being there."

Without warning, Chiang vanished and appeared at the water's edge 15 metres away, all in the flicker of an instant. Then he vanished again and stood, in the same millisecond, at Jonathan's shoulder. "It's fun," he said.

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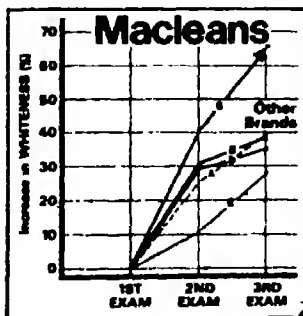


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JONATHAN LIVINGSTON SEAGULL

Jonathan was dazzled. He forgot to ask about heaven. "How do you do that? What does it feel like? How far can you go?"

"You can go to any place and any time that you wish," the elder said. "I've gone everywhere and everywhere I can think of." He looked across the sea. "It's strange. The gulls who scorn perfection for the sake of travel go nowhere, slowly. Those who put aside travel for the sake of perfection go anywhere, instantly. Remember, Jonathan, heaven isn't a place or a time, because place and time are so very meaningless. Heaven is . . ."

"Can you teach me to fly like that?" Jonathan Seagull trembled to conquer another unknown.

"Of course, if you wish to learn."

"Tell me what to do," Jonathan said, and a strange light glowed in his eyes.

Chiang spoke slowly. "To fly as fast as thought, to anywhere that is," he said, "you must begin by knowing that you have already arrived . . ."

The trick, according to Chiang, was for Jonathan to stop seeing himself as trapped inside a limited body that had a 107-centimetre wingspan and performance that could be plotted on a chart. The trick was to know that his true nature lived everywhere at once across space and time.

Return

JONATHAN kept at it, fiercely, day after day, from before sunrise till

past midnight. And for all his effort he moved not a feather-width from his spot.

"Forget about faith!" Chiang said it time and again. "You didn't need faith to fly; you needed to understand flying. This is just the same. Now try again."

And one day Jonathan, standing on the shore, closing his eyes, concentrating, all in a flash knew what Chiang had been telling him. "Why, that's true! *I am* a perfect, unlimited gull!" He felt a great shock of joy.

"Good!" said Chiang, and there was victory in his voice.

Jonathan opened his eyes. He stood alone with the Elder on a totally different seashore—trees down to the water's edge, twin yellow suns turning overhead.

"At last you've got the idea," Chiang said, "but your control needs a little work . . ."

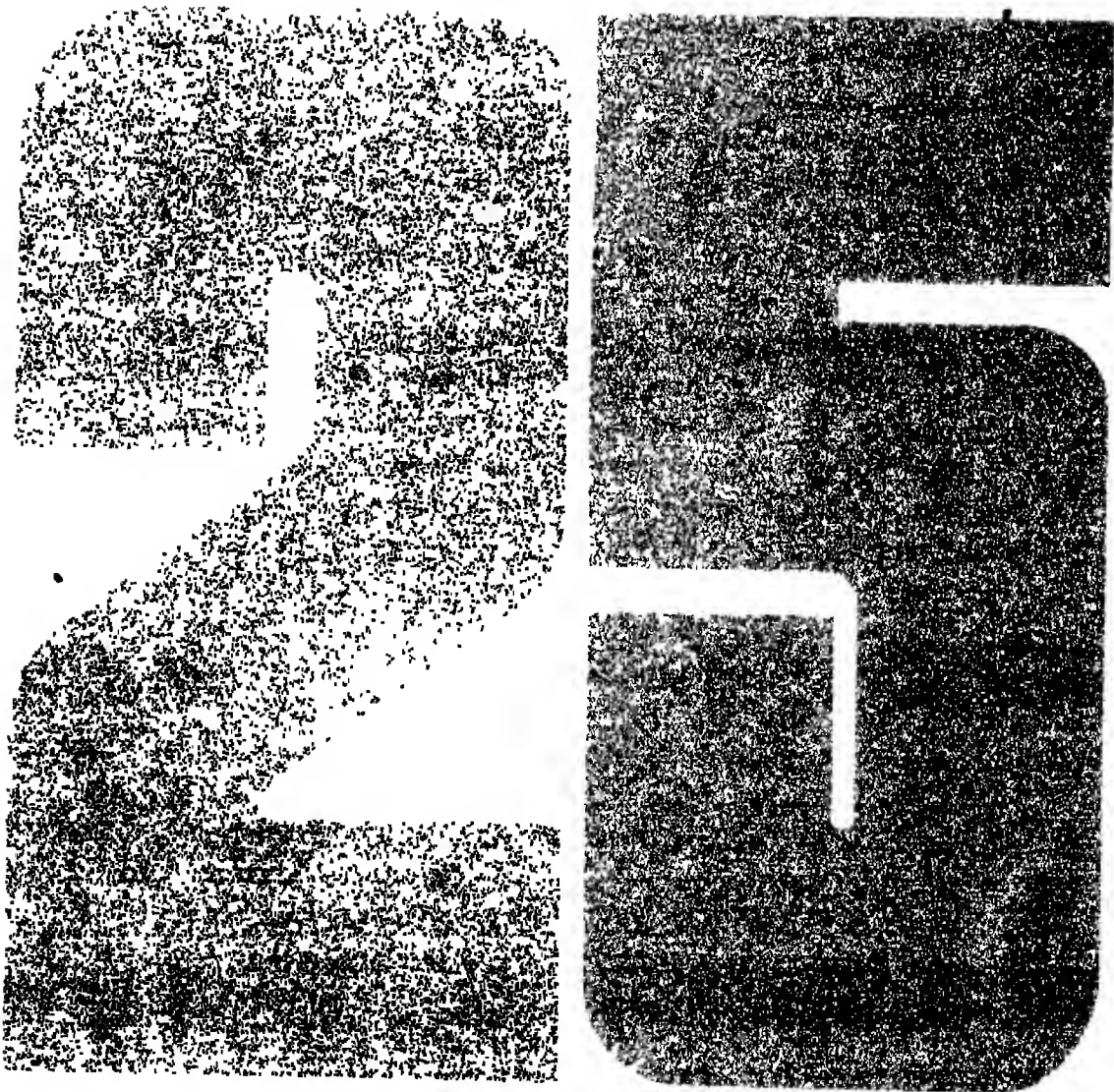
Jonathan was stunned. "Where are we?"

Utterly unimpressed with the strange surroundings, the Elder brushed the question aside. "We're on some planet, obviously, with a green sky and a double star for a sun."

Jonathan gave a scree of delight. "It works!"

"Well, of course it works, Jon," said Chiang. "It always works, when you know what you're doing. Now about your control . . ."

By the time they returned, it was dark. The other gulls looked at Jonathan with awe in their golden eyes,



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for they had seen him disappear from where he had been rooted for so long.

"We can start working with time if you wish," Chiang said, "till you can fly the past and the future. And then you will be ready to begin the most difficult, the most powerful, the most fun of all. You will be ready to begin to fly up and know the meaning of kindness and love."

A month went by, or something that felt about like a month, and Jonathan learned at a tremendous rate. He always had learnt quickly, and now, as the special student of the Elder himself, he took in new ideas like a streamlined feathered computer.

Then the day came that Chiang vanished. He had been talking quietly with them all, exhorting them never to stop their learning and practising and striving to understand more of the perfect invisible principle of all life. As he spoke, his feathers went brighter and brighter, and at last turned so brilliant that no gull could look upon him.

"Jonathan," he said, and these were his last words, "keep working on love."

When the gulls could see again, Chiang was gone.

As the days went past, Jonathan found himself thinking time and again of the earth from which he had come. If he had known there just a tenth, just a hundredth, of what he knew here, how much more life would have meant!

He stood on the sand and fell to wondering if there was a gull back there who might be struggling to break out of his limits, to see the meaning of flight beyond a way of travel to get a breadcrumb from a rowing-boat. Perhaps there might even be one made an Outcast for speaking his truth in the face of the Flock. And the more Jonathan practised his kindness lessons, and the more he worked to know the nature of love, the more he wanted to go back to Earth. For in spite of his lonely past, Jonathan Seagull was born to be an instructor, and his own way of demonstrating love was to give something of the truth that he had seen to a gull who asked only a chance to see truth for himself.

Sullivan, adept now at thought-speed flight and helping the others to learn, was doubtful.

"Jon, you were Outcast once. Why do you think that any of the gulls in your old time would listen to you now? You know the proverb, and it's true: *The gull sees farthest who flies highest*. Those gulls where you came from are standing on the ground, squawking and fighting among themselves. Stay here. Help the ones who are high enough to see what you have to tell them." He was quiet for a moment, and then he said, "What if Chiang had gone back to *his* old worlds? Where would you have been today?"

Sullivan was right. *The gull sees farthest who flies highest*.

Jonathan stayed and worked with

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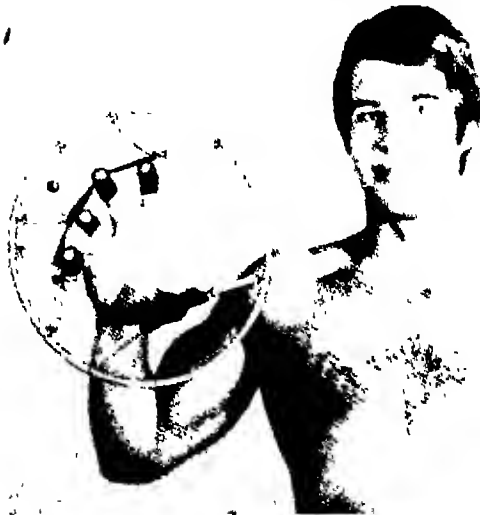
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the new birds coming in, who were all very bright and quick with their lessons. But the feeling returned, and he couldn't help but think that there might be one or two gulls back on Earth who would be able to learn, too. How much more would he have known by now if Chiang had come to him on the day he was Outcast!

"Sully, I must go back," he said at last. "Your students are doing well. They can help you bring the newcomers along."

Sullivan Seagull laughed in spite of himself. "You crazy bird," he said kindly. "If anybody can show someone on the ground how to see a thousand kilometres, it will be Jonathan Livingston Seagull." He looked at the sand. "Good-bye, Jon, my friend."

"Good-bye, Sully. We'll meet again." And, with that, Jonathan held in thought an image of the great gull flocks on the shore of another time, and he knew with practised ease that he was not bone and feather but a perfect idea of freedom and flight, limited by nothing at all.

Beginning

FLETCHER LYND SEAGULL was still quite young, but already he knew that no bird had ever been so wrongly treated by any Flock.

"I don't care what they say," he thought fiercely, as he flew out towards the Far Cliffs. "There's so much more to flying than just flapping around from place to place. A mosquito does that! One little bar-

rel-roll around the Elder Gull, just for fun, and I'm Outcast! Are they blind? Can't they see? Can't they think of the glory that it will be when we really learn to fly?

"I don't care what they think. I'll show them what flying is! I'll be pure Outlaw, if that's the way they want it. And I'll make them so sorry..."

The voice came inside his own head, and though it was very gentle, it startled him so much that he faltered and stumbled in the air.

"Don't be harsh on them, Fletcher Seagull," said the voice. "In casting you out, the other gulls have only hurt themselves, and one day they will know this, and one day they will see what you see. Forgive them, and help them to understand."

Just off his right wingtip flew the most brilliant white gull in all the world, gliding effortlessly along, not moving a feather, at what was very nearly Fletcher's top speed.

There was a moment of chaos in the young bird. "What's going on? Am I mad? What is this?"

Low and calm, the voice went on within his thought, demanding an answer: "Fletcher Lynd Seagull, do you want to fly?"

"Yes, I want to fly!"

"Do you want to fly so much that you will forgive the Flock, and learn, and go back to them one day and work to help them know?"

There was no lying to this magnificent being, no matter how proud or hurt a bird was Fletcher Seagull.

"I do," he said softly. "Then, Fletcher," the bright creature said to him, "let's begin with Level Flight..."

Teacher

JONATHAN circled slowly over the Far Cliffs, watching. This rough young Fletcher Gull was very nearly a perfect flight student. He was strong and light and quick in the air—but far and away more important—he had a blazing drive to learn to fly.

Here he came this minute, a blurred grey shape roaring out of a dive, flashing past his instructor. He pulled abruptly into another try at a 16-point vertical slow-roll, calling the points out loud.

"...8...9...10... see-Jonathan-I'm-running-out-of-air-speed... 11... I-want-good-sharp-stops-like-yours... 12... but-blast-it-I-just-can't-make... *aaak!*"

Fletcher's whipstall at the top was all the worse for his rage and fury at failing. He fell backwards, tumbled, slammed savagely into an inverted spin, and recovered at last, panting, 30 metres below his instructor's level. "You're wasting your time with me, Jonathan! I'm too stupid! I try and try, but I'll never get it!"

Jonathan Seagull looked down at him and nodded. "You'll never get it for sure as long as you make that pull-up so hard. Fletcher, you lost 60 k.p.h. in the entry. You *have* to be smooth! Firm but smooth, remember?" He dropped down to the level

of the younger gull. "Let's try it together now, in formation. And pay attention to that pull-up."

By the end of three months Jonathan had six other students, Outcasts all, yet curious about this strange new idea of flight for the joy of flying.

Still, it was easier for them to practise high performances than it was to understand the reason behind it.

"Each of us is in truth an idea of the Great Gull, an unlimited idea of freedom," Jonathan would say in the evenings on the beach, "and precision flying is a step towards expressing our real nature. Everything that limits us we have to put aside."

And his students would be asleep, exhausted from the day's flying. They liked the practice, because it was fast and exciting, but not one of them, not even Fletcher Lynd Gull, had come to believe that the flight of ideas could possibly be as real as the flight of wind and feather.

"Your whole body, from wingtip to wingtip," Jonathan would say, "is nothing more than your thought itself, in a form you can see. Break the chains of your thought, and you break the chains of your body, too." But no matter how he said it, it sounded like pleasant fiction, and they had greater need of sleep.

It was only a month later that Jonathan said the time had come to return to the Flock.

"We're not ready!" said Henry Calvin Gull. "We're Outcast! We can't force ourselves to go where

we are not welcome, can we?"

"We're free to go where we wish and be what we are," Jonathan answered, and he lifted from the sand and turned east, towards the home grounds of the Flock.

There was brief anguish among his students, for it is the Law of the Flock that an Outcast never returns, and the Law had not been broken once in 10,000 years. The Law said stay; Jonathan said go; and by now he was 1,500 metres across the water. If they waited much longer, he would reach a hostile Flock alone.

"Well, we don't have to obey the law if we're not a part of the Flock, do we?" Fletcher said, rather self-consciously. "Besides, if there's a fight, we'll be a lot more help there than here."

So they flew in from the west that morning, eight of them in a double-diamond formation, wingtips almost overlapping. They came across the Flock's Council Beach at 215 k.p.h., Jonathan in the lead, Fletcher smoothly at his right wing, Henry Calvin struggling gamely at his left. Then the whole formation rolled slowly to the right as one bird, . . . level . . . to . . . inverted . . . to . . . level, the wind whipping over them all.

The squawks and grockles of the Flock were cut off as though the formation were a giant knife, and 8,000 gull eyes watched without a single blink. Now, one by one, each of the eight birds pulled sharply upwards into a full loop and flew all the way



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around to a dead-slow, stand-up landing on the sand. Then, as though this sort of thing happened every day, Jonathan Seagull began his critique of the flight. "To begin with," he said with a wry smile, "you were all a bit late on the join-up . . ."

Freedom

IT WENT like lightning through the Flock. Those birds are Outcast! And they have returned! And that . . . that can't happen! Fletcher's predictions of battle melted in the Flock's confusion.

"Well, sure, O.K., they're Outcast," said some of the younger gulls, "but hey, man, where did they learn to fly like that?"

It took almost an hour for the Word of the Elder to pass through the Flock: Ignore them. The gull who speaks to an Outcast is himself Outcast.

Grey-feathered backs were turned upon Jonathan from that moment onward, but he didn't appear to notice. He held his practice sessions directly over the Council Beach, and for the first time he began pressing his students to the limit of their ability. "Martin Gull!" he shouted across the sky. "You say you know low-speed flying. You know nothing till you prove it! *Fly!*"

So, quiet little Martin William Seagull, started to be caught under his instructor's fire, surprised himself and became a wizard of low speeds. In the lightest breeze he

could curve his feathers to lift himself without a single flap of his wing from sand to cloud and down again. Likewise, Charles-Roland Gull flew the Great Mountain Wind to 7,300 metres, came down blue from the cold, thin air, amazed and happy, determined to go still higher tomorrow.

Fletcher Seagull, who loved aerobatics like no one else, conquered his 16-point vertical slow-roll and the next day topped it off with a triple cartwheel, his feathers flashing white sunlight to a beach from which more than one furtive eye watched.

Every hour Jonathan was there at the side of each of his students, demonstrating, suggesting, pressuring, guiding. He flew with them through night and cloud and storm, for the sport of it, while the Flock huddled miserably on the ground.

When the flying was done, the students relaxed on the sand, and in time they listened more closely to Jonathan. And in the night, another circle formed around the circle of students—a ring of curious gulls listening in the darkness for hours, not wishing to see or be seen, fading away before daybreak.

It was a month after the Return that the first gull of the Flock crossed the line and asked to learn how to fly. In his asking, Terrence Lowell Gull became a condemned bird, labelled Outcast, and the eighth of Jonathan's students.

The next night from the Flock came Kirk Maynard Gull, wobbling



across the sand, dragging his left wing, to collapse at Jonathan's feet. "Help me," he said quietly, speaking in the way that the dying speak. "I want to fly more than anything else in the world."

"Come along, then," said Jonathan. "Climb with me away from the ground, and we'll begin."

"You don't understand. My wing. I can't move my wing."

"Maynard Gull, you have the freedom to be yourself, your true self, here and now, and nothing can stand in your way. It is the Law of the Great Gull, the Law that Is."

"Are you saying I can fly?"

"I say you are free."

As simply and as quickly as that, Kirk Maynard Gull spread his wings, effortlessly, and lifted into the dark night. The Flock was roused from sleep by his cry, as loud as he could scream it, from 150 metres up: "I can fly! Listen! I can fly!"

By sunrise there were nearly a thousand birds standing outside the circle of students, looking curiously at Maynard. They didn't care whether they were seen or not, and they listened, trying to understand Jonathan Seagull.

He spoke of very simple things—that it is right for a gull to fly, that freedom is the very nature of his being, that whatever stands against that freedom must be set aside, be it ritual or superstition or limitation in any form.

"Set aside," came a voice from the

multitude, "even if it be the Law of the Flock?"

"The only true law is that which leads to freedom," Jonathan said. "There is no other."

"How do you expect us to fly as you fly?" came another voice. "You are special and gifted and divine, above other birds."

"Look at Fletcher! Lowell! Charles-Roland! Judy Lee! Are they also special and gifted and divine? No more than you, no more than I. The only difference is that they have begun to understand what they are and have begun to practise it."

His students, save Fletcher, shifted uneasily. They hadn't realized that this was what they were doing.

The crowd grew larger every day, coming to question, to idolize, to scorn.

Death

IT HAPPENED just a week later. Fletcher was demonstrating the elements of high-speed flying to a class of new students. He had just pulled out of his dive from 2,000 metres, a long grey streak firing a few centimetres above the beach, when a young bird on its first flight glided directly into his path, calling for its mother. With a tenth of a second to avoid the youngster, Fletcher Lynd Seagull snapped hard to the left, at something over 300 k.p.h., into a cliff of solid granite.

It was, for him, as though the rock were a giant hard door into another world. A burst of fear and shock as

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JONATHAN LIVINGSTON SEAGULL

he hit, and then he was adrift in a strange sky, forgetting, remembering, forgetting; afraid and sad and sorry, terribly sorry.

The voice came to him as it had in the first day that he had met Jonathan Livingston Seagull. "The trick, Fletcher, is that we are trying to overcome our limitations in order—patiently. We don't tackle flying through rock until a little later in the programme."

"Jonathan! What are you doing here? The cliff! Didn't I . . . die?"

"Oh, Fletch, come on. Think. If you are talking to me, then obviously you didn't die. What you did manage to do was to change your level of consciousness rather abruptly. It's your choice now. You can stay here and learn on this level—which is quite a bit higher than the one you left—or you can go back and keep working with the Flock. The Elders were hoping for some kind of disaster; they're startled that you obliged them so well."

"I want to go back to the Flock, of course. I've barely begun with the new group."

"Very well, Fletcher. Remember what we were saying about one's body being nothing more than thought itself . . . ?"

Fletcher shook his head and stretched his wings and opened his eyes at the base of the cliff, in the centre of the whole Flock assembled. There was a great clamour of squawks and screeches from the crowd when first he moved. "He

lives! He that was dead *lives!*"

"Touched him with a wingtip! Brought him to life. He's a devil! *Devil!* Come to break the Flock!"

There were 4,000 gulls in the crowd, frightened at what had happened, and the cry *devil* went through them like the wind of an ocean storm. Eyes glazed, beaks sharp, they closed in to destroy.

"Would you feel better if we left, Fletcher?" asked Jonathan.

"I wouldn't object too much if we did . . ."

Instantly they stood together 750 metres away, and the flashing beaks of the mob closed on empty air.

"Why is it," Jonathan puzzled, "that the hardest thing in the world is to convince a bird that he is free, and that he can prove it for himself if he'd just spend a little time practising? Why should that be so hard?"

Fletcher still blinked from the change of scene. "What did you just do? How did we get here?"

"You did say you wanted to be out of the mob, didn't you?"

"Yes! But how did you . . ."

"Like everything else, Fletcher, Practice."

Love

BY MORNING the Flock had forgotten its insanity, but Fletcher had not. "Jonathan, remember what you said a long time ago, about loving the Flock enough to return to it and help it learn?"

"Sure."

"I don't understand how you

manage to love a mob of birds that has just tried to kill you."

"Oh, Fletch, you don't love that! You don't love hatred and evil, of course. You have to practise and see the real gull, the good in every one of them, and to help them see it in themselves. That's what I mean by love. It's fun, when you get the knack of it.

"I remember a fierce young bird, for instance—Fletcher Lynd Seagull, his name. Just been made Outcast, ready to fight the Flock to the death, getting a start on building his own bitter hell out on the Far Cliffs. And here he is today building his own heaven instead, and leading the whole Flock in that direction."

Fletcher turned to his instructor, and there was a moment of fright in his eyes.

"*Me* leading? What do you mean, *me* leading? You're the instructor here. You couldn't leave!"

"Couldn't I? Don't you think there might be other flocks, other Fletchers, that need an instructor more than this one, which is on its way towards the light? You don't need me any longer. You need to keep finding yourself—that real, unlimited Fletcher Seagull. He's your instructor. You need to understand him and to practise him."

A moment later, Jonathan's body wavered in the air, shimmering, and began to go transparent. "Don't let them spread silly rumours about me, or make me a god. O.K., Fletch?

I'm a seagull. I like to fly, perhaps . . ."

"Jonathan!"

The shimmering stopped. Jonathan Seagull had vanished.

AFTER a time, Fletcher Gull dragged himself into the sky and faced a brand-new group of students, eager for their first lesson.

"To begin with," he said heavily, "you've got to understand that a seagull is an unlimited idea of freedom, an image of the Great Gull, and your whole body, from wingtip to wingtip, is nothing more than your thought itself."

The young gulls looked at him quizzically. Hey, they thought, this doesn't sound like a rule for a loop.

Fletcher sighed and started over. "Hm. Ah . . . very well," he said, and eyed them critically. "Let's begin with Level Flight." And, saying that, he understood all at once that his friend had quite honestly been no more divine than Fletcher himself.

No limits, Jonathan? he thought. Well, then, the time's not distant when I'm going to appear out of thin air on *your* beach, and show you a thing or two about flying!

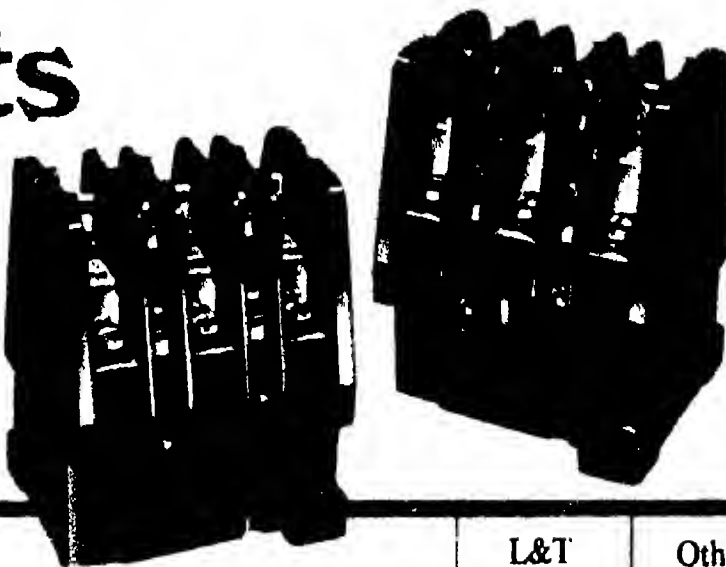
And though he tried to look properly severe for his students, Fletcher Seagull suddenly saw them all as they really were, just for a moment, and he more than liked, he loved what he saw. No limits, Jonathan? he thought, and he smiled. His race to learn had begun.

THE END

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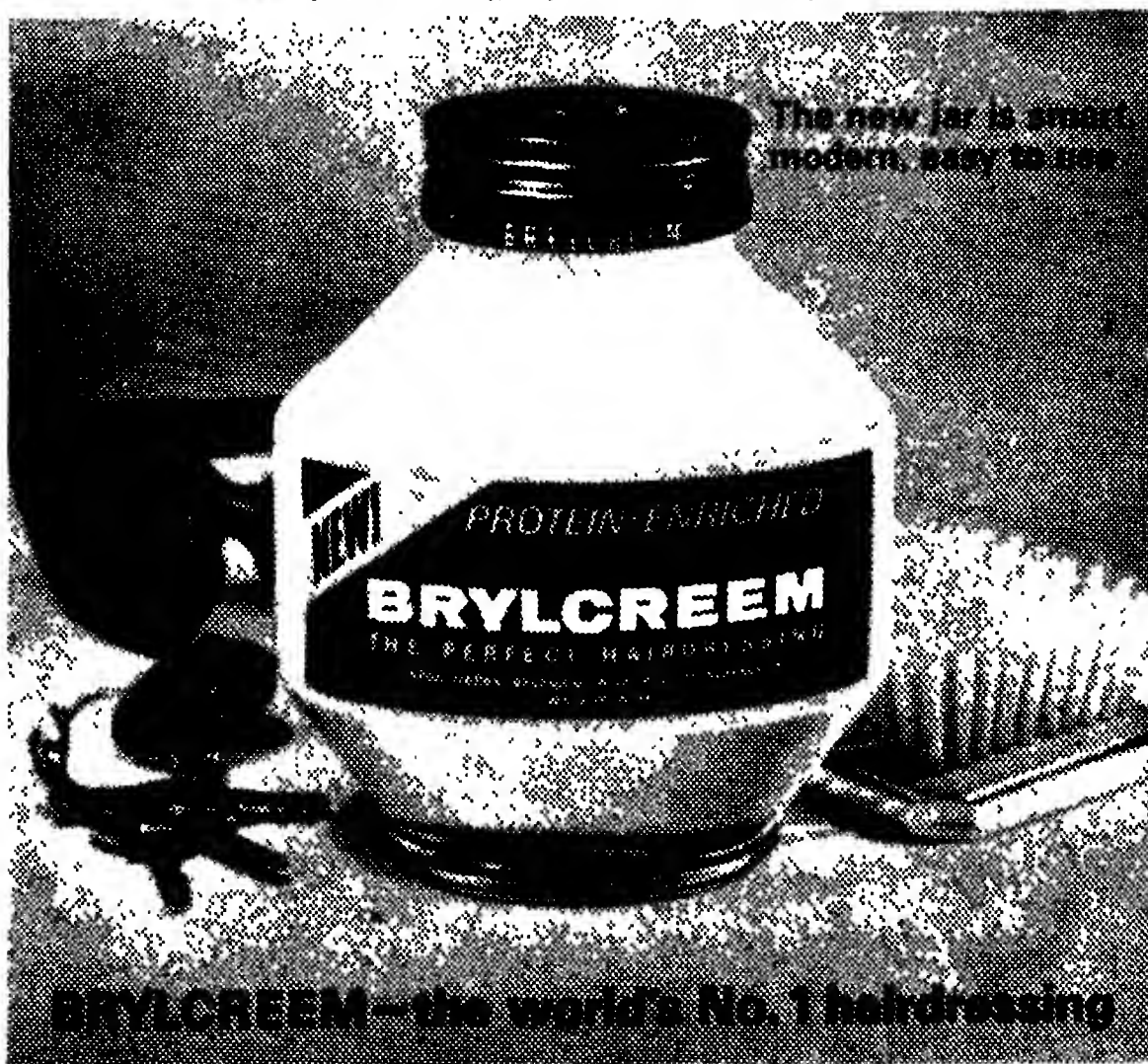
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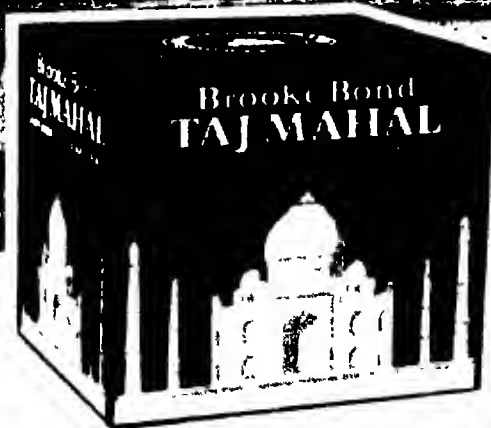
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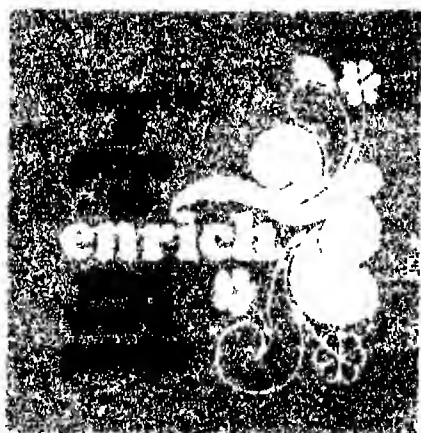


it pays to **enrich** your word power

BY PETER FUNK

IN THE list below, tick the word or phrase you believe is *nearest in meaning* to the key word. Answers are on the next page.

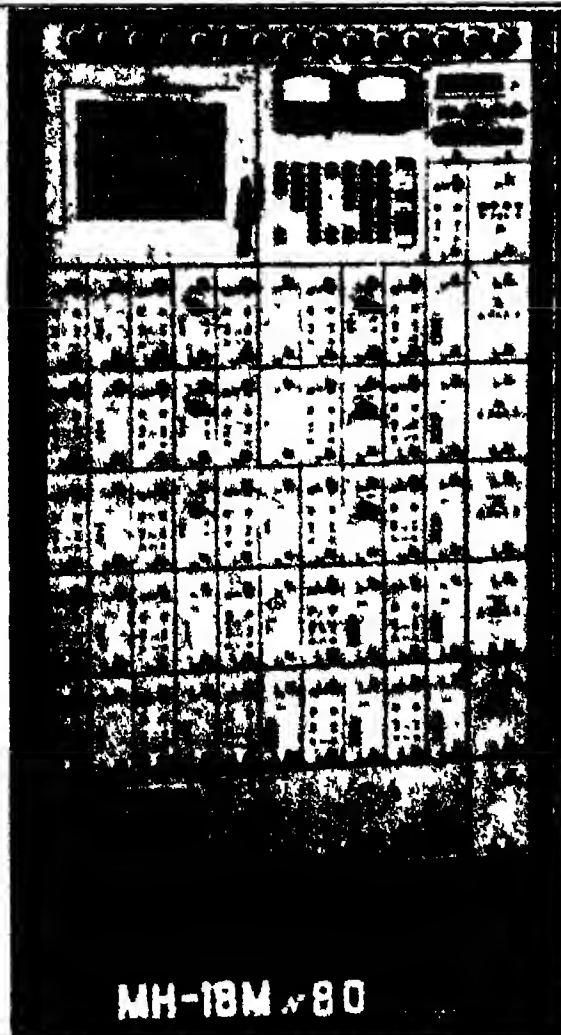
- | | |
|---|---|
| (1) tangential (tan jen' shl) - A: opposite. B: divergent. C: slanting. D: odd. | (11) apportion (a porc' shun) - A: to select. B: allot. C: set in order. D: decide. |
| (2) abrasive (a bray' siv) - A: distracting. B: sticky. C: scraping. D: sparkling. | (12) anodyne (an' odine) - A: pain-reliever. B: depressant. C: cure-all. D: stimulant. |
| (3) coffer (kof' er) - A: coin. B: tomb. C: drainpipe. D: strong-box. | (13) disinterested - A: diffident. B: ambiguous. C: reluctant. D: impartial. |
| (4) tantamount (tan' ta mount) - A: teasing. B: equivalent. C: indicative. D: towering. | (14) acrimonious (ak ri moh' ni us) - A: vengeful. B: smelly. C: caustic. D: tearful. |
| (5) mutual - A: reciprocal. B: particular. C: friendly. D: inseparable. | (15) recrimination (re krim i nay' shun) - A: vindication. B: bitter abuse. C: recommitment. D: countercharge. |
| (6) demonstrable - A: conditional. B: outstanding. C: provable. D: explicit. | (16) formalize - A: to shape. B: inform. C: standardize. D: document. |
| (7) reimburse (ree im berse') - A: to flee. B: strengthen. C: supplement. D: repay. | (17) enmity - A: competitiveness. B: hugeness. C: hostility. D: jealousy. |
| (8) abortive - A: fruitless. B: evasive. C: twisted. D: gruelling. | (18) roseate (rose' ee ate) - A: ornate. B: delicate. C: thorny. D: optimistic. |
| (9) obsolete - A: traditional. B: outmoded. C: rare. D: useless. | (19) cryptic - A: confused. B: hidden. C: devious. D: concise. |
| (10) chameleon (ka meel' yun) - A: brilliant-hued bird. B: maverick. C: lizard. D: ornamental shrub. | (20) hirsute (her' suit) - A: hairy. B: strong. C: ugly. D: wild. |



- (1) **tangential**—B: Divergent; touching only lightly; as, to introduce *tangential* issues. Latin *tangere*, "to touch."
- (2) **abrasive**—C: Scraping; tending to wear down; as, an *abrasive* wheel. Latin *abradere*, "to scrape off."
- (3) **coffer**—D: Chest or strong-box for valuables; in plural, treasury or funds; as, to deplete party *coffers*. Latin *cophinus*, "basket."
- (4) **tantamount**—B: Equivalent in value or significance; as, silence *tantamount* to an admission of guilt. Anglo-Norman *tant amunter*, "to amount to as much."
- (5) **mutual**—A: Reciprocal; felt or done each for the other; as, *mutual* admiration. Latin *mutuus*.
- (6) **demonstrable**—C: Capable of being demonstrated or proved; as, a *demonstrable* success. Latin *demonstrare*, "to show."
- (7) **reimburse**—D: To repay; as, to *reimburse* a salesman for his expenses. French *rembourser*.
- (8) **abortive**—A: Fruitless; unsuccessful; coming to nothing; as, an *abortive* hijacking. Latin *aboriri*, "to miscarry."
- (9) **obsolete**—B: Outmoded; out of date; no longer current; as, an *obsolete* word; *obsolete* equipment. Latin *obsolescere*, "to grow old."
- (10) **chameleon**—C: Lizard capable of changing colour according to its surroundings; hence, a fickle or changeable person; as, a political *chameleon*. Greek *khamailon*.
- (11) **apportion**—B: To allot; assign as due share; as, to *apportion* funds, blame, praise. Old French *apportionner*.
- (12) **anodyne**—A: Pain-relieving agent or drug; anything that soothes or calms; as, the *anodyne* of sleep. Greek *anodunos*, "pain-free."
- (13) **disinterested**—D: Impartial; unbiased; free of self-interest or selfish motive; as, a *disinterested* witness.
- (14) **acrimonious**—C: Caustic; biting; bitter and irritating in disposition or manner; as, an *acrimonious* debate. Latin *acrimonia*, "sharpness."
- (15) **recrimination**—D: Countercharge; retaliatory accusation against an accuser; as, to resort to *recrimination*. Latin *recriminare*, "to accuse again."
- (16) **formalize**—A: To shape; give a definite form to; make formal; as, to *formalize* procedure. Latin *forma*, "shape."
- (17) **enmity**—C: Hostility; hatred; animosity; as, tribal *enmity*. Old French *enemistié*, from *enemi*, "enemy."
- (18) **roseate**—D: Optimistic; rosy; as, a *roseate* economic forecast. Latin *roseus*, from *rosa*, "rose."
- (19) **cryptic**—B: Hidden; secret; occult; mystical; as, a *cryptic* message. Greek *kruptikos*, from *kruptos*, "hidden."
- (20) **hirsute**—A: Hairy; shaggy; as, to be *hirsute* in appearance. Latin *hirsutus*.

Vocabulary Ratings

- 16 or more correct.....excellent
 15-12 correctgood
 11-9 correct.....fair



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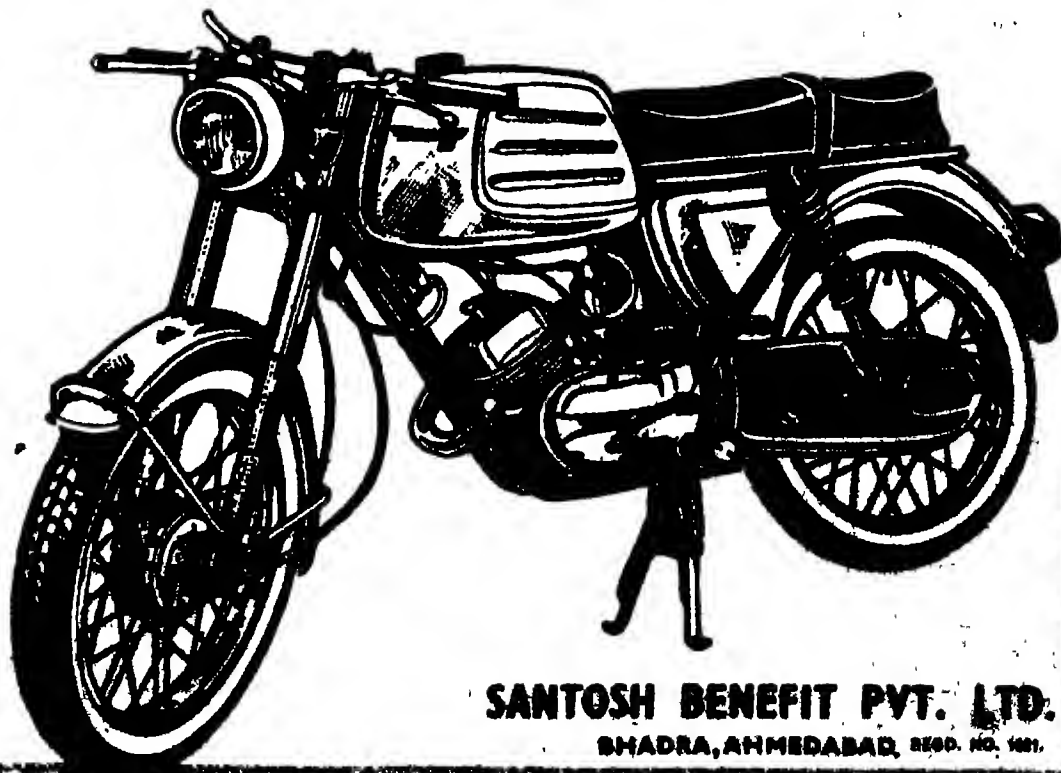
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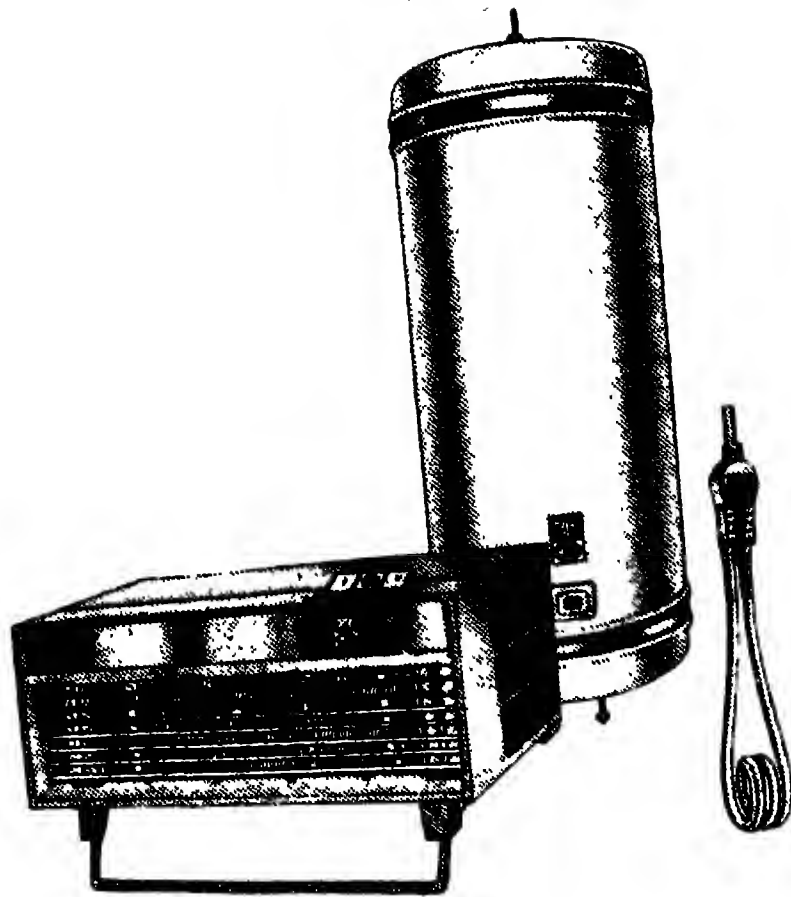
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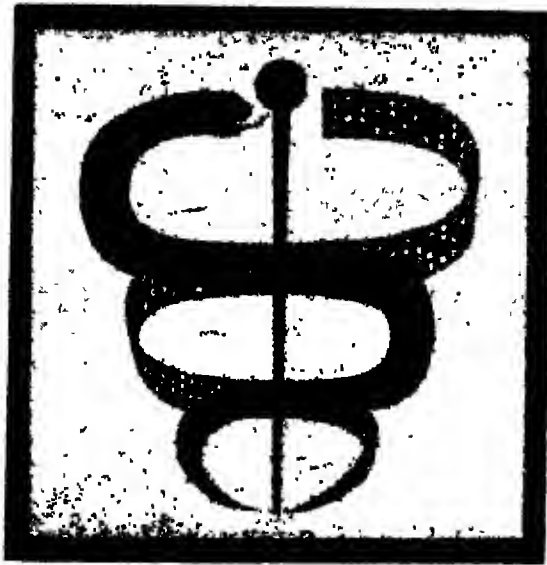
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News from the World of Medicine

Motor-Racing Special

IN LESS than five years, the International Grand Prix Medical Service has achieved a proud record—seven lives saved, and more than 300 racing drivers, mechanics and spectators treated for a variety of injuries. It is the largest mobile hospital in the world, built at a cost of over Rs. 9 lakhs, to take teams of surgeons with the finest equipment to the world's racetracks.

The unit is the brainchild of Louis Stanley, chairman and managing director of the BRM racing car firm and now director-general of the service.

He designed a mobile hospital with two full operating theatres and the finest modern equipment, including an X-ray machine which provides a print in 25 seconds, an electrocardiograph machine and equipment for neurosurgery and the treatment of burns, all crammed into an articulated lorry.

The unit is fully staffed with surgeons, anaesthetists and nurses. It has a full-time driver and a permanent medical technician. And because of the protocol that prevents doctors practising in a foreign country, there are teams of medical men and women in 11 countries to take over when the unit moves into their territory.

—Brian Groves in *Medical News-Tribune*

Now: Frozen Skin

THOUGH doctors have yet to discover a method of permanently grafting skin from one individual on to another, they frequently use skin from corpses to treat severe burns and other open wounds. Used to cover a third-degree burn, the donated skin helps to prevent the loss of water and vital chemicals and allows the injury to progress rapidly to the point at which it is clean enough to accept a permanent graft of the victim's own skin.

As stored skin cannot normally be used more than two weeks after its removal from a body, hospitals cannot build up large skin banks. Now, however, doctors at the Shriners Burns Institute, affiliated with Boston's Massachusetts General Hospital, are applying a technique of deep freezing and thawing that allows them to keep donated skin in a viable state for at least six months.

The most critical part of the process is the thawing. "You can get away with fast freezing," says Dr. Conrado Bondoc, who devised the procedure, "but you can't get away with slow thawing. The skin must be thawed in less than a minute." To achieve this, a technician dunks the polyethylene bag containing the frozen skin into water at body temperature. In seconds the skin reaches the same

READER'S DIGEST

temperature and is ready for grafting.

In the last two years Institute surgeons have successfully treated hundreds of patients for burns and other wound-healing problems using frozen skin.

—*Newsweek*

New Muscle-Power

SUCCESSFUL transplants of skeletal muscle from one part of the body to another—believed to be the first of their kind—have been achieved at the Middlesex Hospital, London.

Operating on 60 patients, Noel Thompson, consultant plastic surgeon, has taken muscle from the foot or forearm to reanimate paralysed muscles around the eyes or mouth. All earlier attempts at such transplants over the past 90 years have failed through the development of fibrous tissue at the site of the transplant.

The earlier failures, although not fully understood, appear to have been caused by an insufficiently rapid regeneration of the blood vessel network. Contractile white muscle has high metabolic demands, and the problem has been to persuade it to survive for several days at its new site while new vascular connexions are established with surrounding tissue.

Work in the United States had shown that if the nervous system of white muscle were disconnected, the muscle changed to red "postural" type, which has much lower metabolic demands. So by denervating the required muscle in its original site some weeks before the transplant, it seemed possible that muscle would be produced whose initial metabolic demands would be lower, thus providing a better chance of survival.

In practice, this has proved to be the case. Over two or three months, motor

nerves from adjacent muscle grow into the transplanted muscle and either connect to existing nerve "end plates" or establish new end plates, to provide the normal contractile movement.

—Anthony Tucker in *The Guardian*, London

Fit—for Half a Century

AFTER the age of 50, former athletes are no fitter than ordinary people. This is the conclusion of Dr. Peter Schnohr of Copenhagen's St. Elizabeth Hospital, who has just surveyed the lives and deaths of 297 sports champions who were born between 1880 and 1910. After the age of 50, the subjects died at the same rate from the same types of diseases as anyone else. Between the ages of 25 and 50, Dr. Schnohr found, the athletes' death rate was 39 per cent below the average.

—Forum World Features

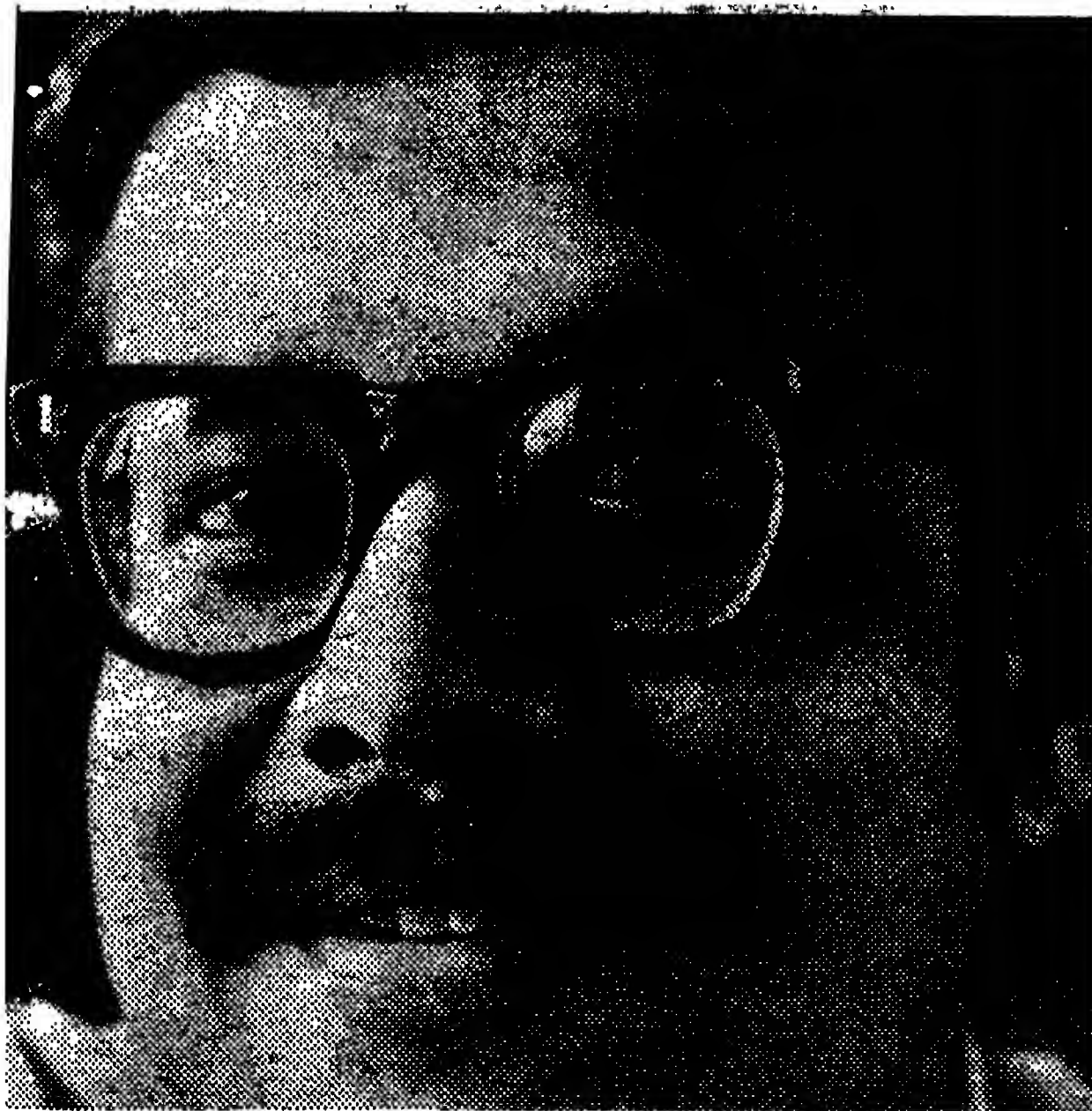
Who Says "Go"?

DOCTORS investigating the mechanism which brings on the birth of a baby have made a fascinating discovery, which overturns beliefs going back thousands of years. It has long been known that a gland secretion called oxytocin stimulates the muscle contractions which cause the baby to leave the womb. And, understandably, it was assumed that this powerful substance was produced by the mother.

Now a team at St. Bartholomew's Hospital, London, led by Dr. Timothy Chard, has found that oxytocin is produced in quantity by the baby itself—and only at the time of its birth.

So it looks as though each human infant triggers off its own birth, stimulating the womb to deliver it when some alarm system decides that it is time to go.

—Chapman Fletcher in the *Daily Express*, London



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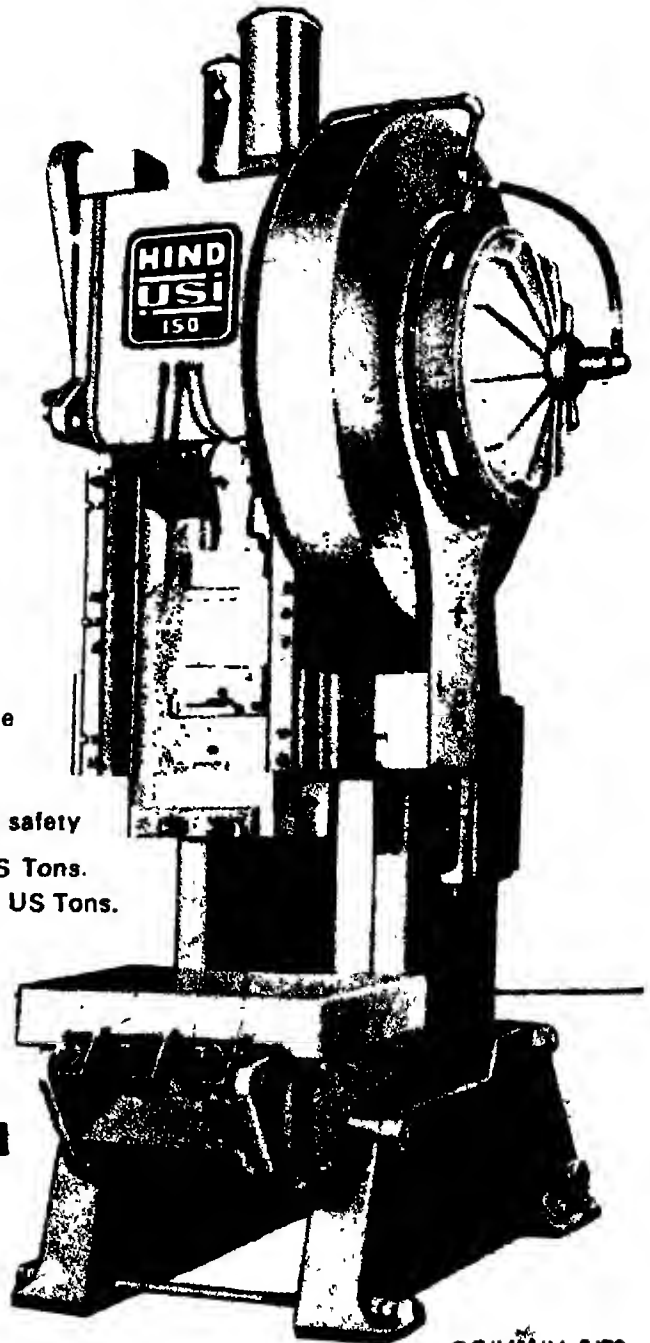
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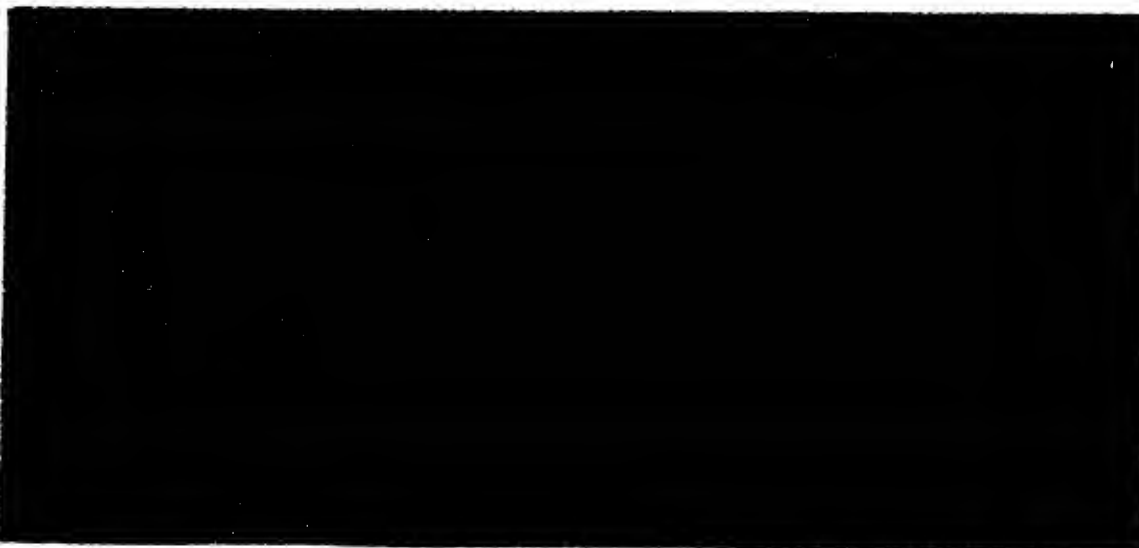
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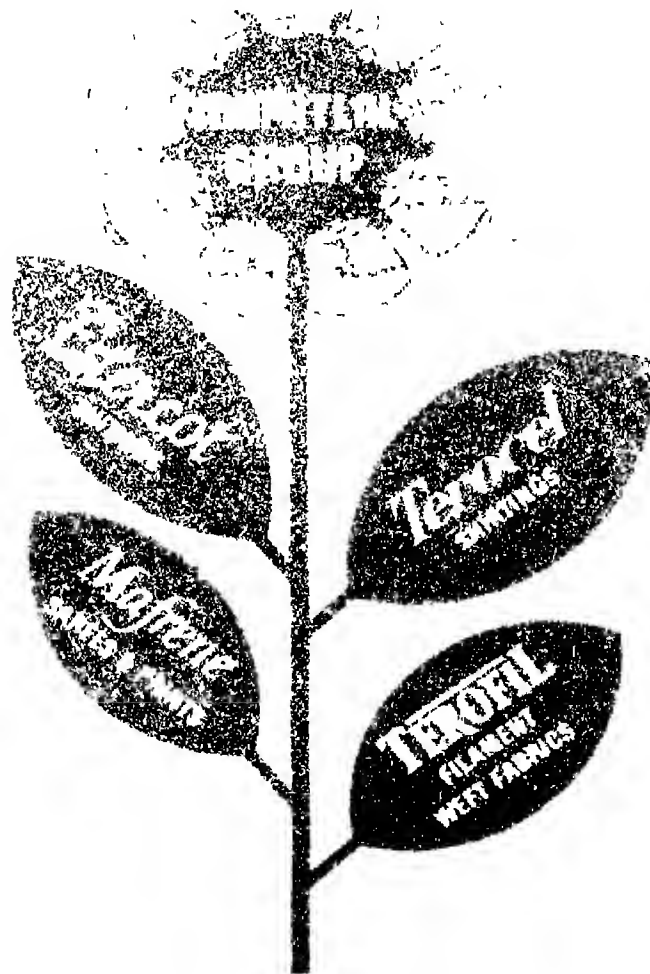
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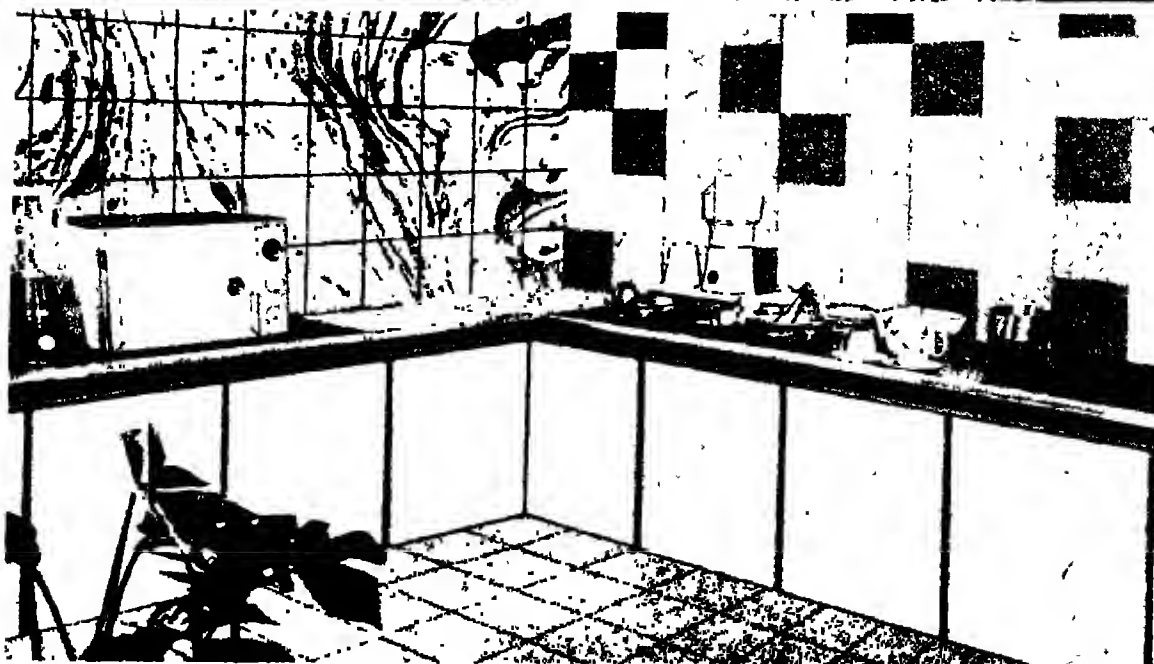
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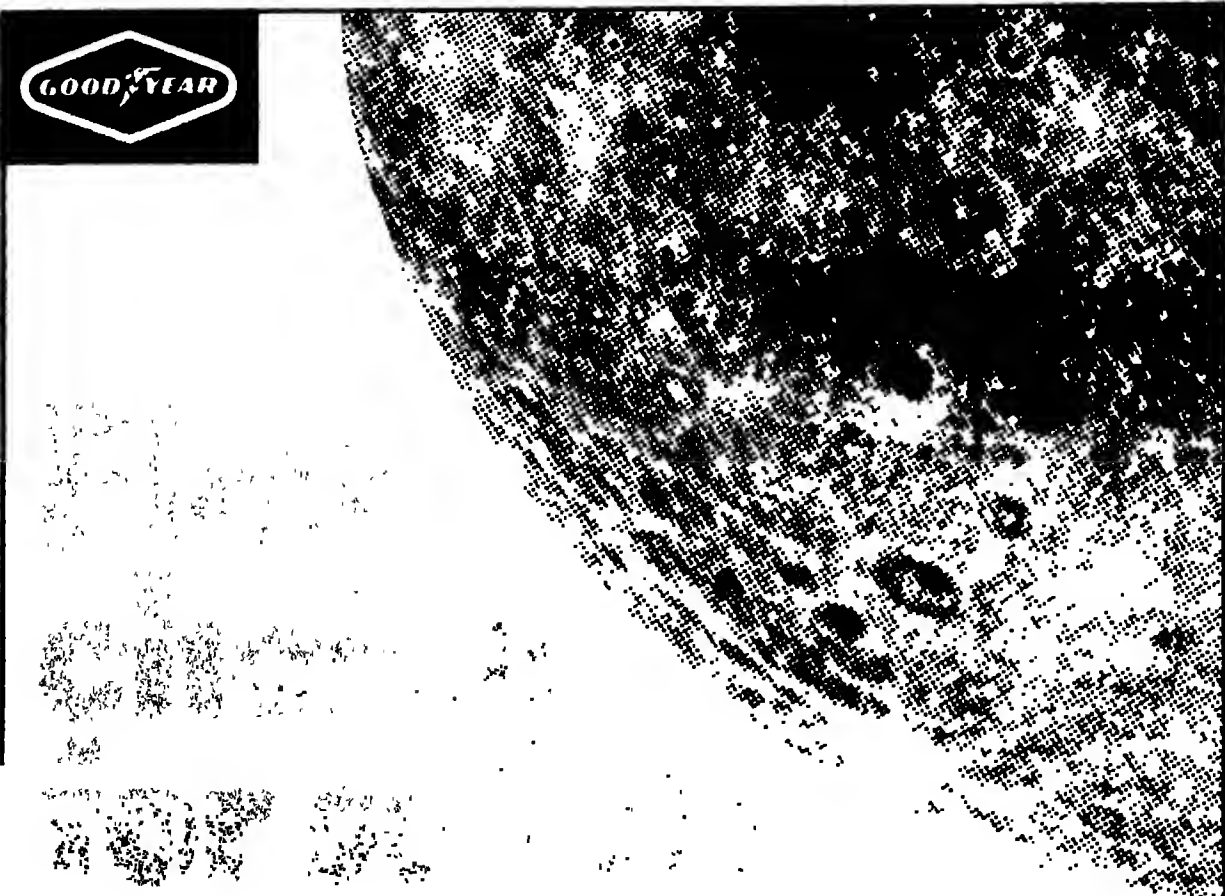
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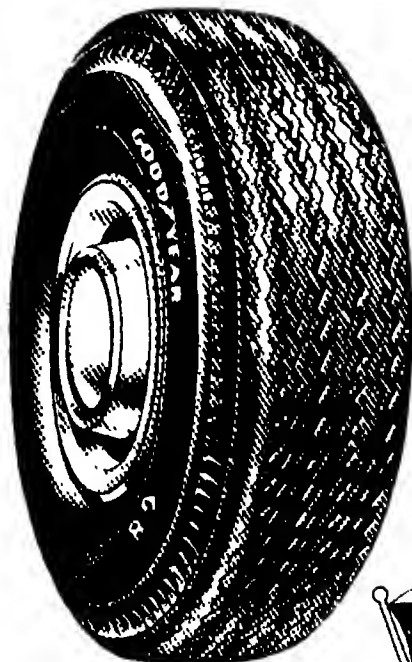
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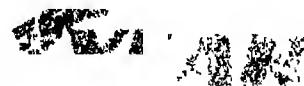


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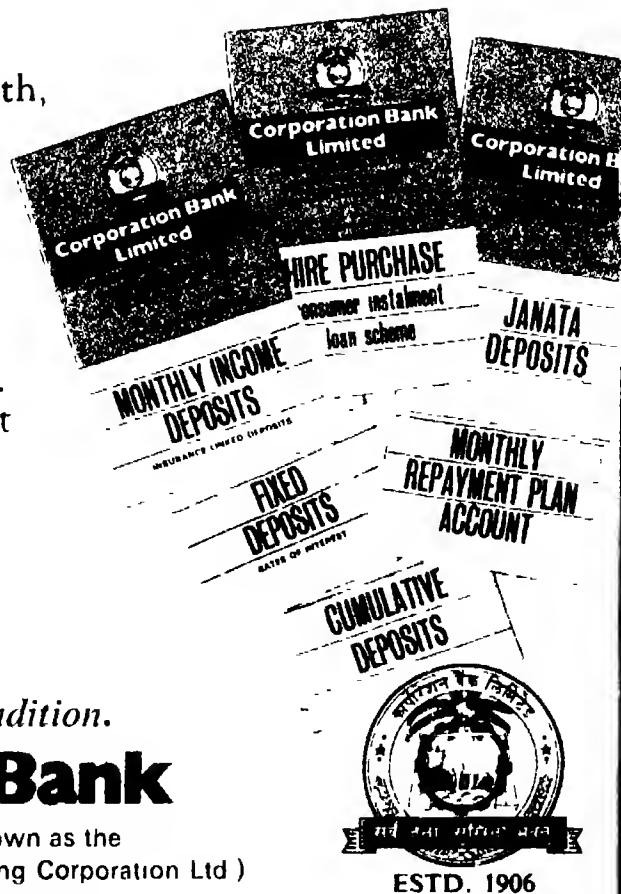
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Relaying a compliment is the easiest thing in the world. And it's a spirit-lifter for everyone

Pass a Good Word On

BY DR. NORMAN VINCENT PEALE

IN A LITTLE Rhode Island mill town years ago, as a young minister assigned to my first church, I found the congregation split down the middle by one of those feuds that start with two stubborn contestants and then have everyone taking sides. The leader of one faction was an irresistible force named Mrs. Follett. The head of the other was an immovable object named Mrs. Lloyd. Things reached the point where the two groups sat on opposite sides of the church, glaring across the aisle.

Drawing on my vast inexperience, I was all for calling on each of these ladies and pointing out their Christian duty to stop hating each other. But a member of the congregation, a mill worker named Rowbottom, stopped me. "It won't work," he said. "You'll just make things worse. A conductor of goodwill, that's what a minister should be. Goodwill is stronger than ill will."

"But how does one transmit goodwill," I objected, "if there isn't any in the first place?"

Rowbottom earnestly tapped me on the shoulder. "Create some, my boy," he said. "Create some!" And he walked away.

I knew that hostility provokes hostility, that anger breeds more anger, and that the church was caught in this vicious circle. As I pondered Rowbottom's words, it occurred to me that the converse might also be true. If either of these embattled ladies could be induced to say something remotely pleasant about the other, perhaps the downward spiral could be reversed.

In those days, full of zeal, I made a great many parish calls. And since I weighed only about 60 kilograms wringing wet, the good ladies of the parish were for ever offering me glasses of milk and pieces of pie or cake "to keep you from blowing away." So one day, sitting in Mrs.

Lloyd's living-room, I took my courage in both hands and remarked that on the previous afternoon I had had a piece of pie at Mrs. Follett's house. I added casually, "She's a good cook, isn't she?"

"Hmmmph!" simmered Mrs. Lloyd. "She's a good cook, all right. If her disposition were half as good, we could all be thankful!"

Food for Thought. Soon I was in her adversary's kitchen with a plate of biscuits balanced on my knee. "Mrs. Follett," I said, after a few preliminaries, "Mrs. Lloyd says you're a good . . ." (here I crunched a happy mouthful) ". . . cook. As indeed you are."

"Well!" said Mrs. Follett. "Well, I never! I suppose if it comes to that . . ." (she tossed her head as if she couldn't believe what she heard her voice saying) ". . . Peggy Lloyd has a light hand with pastry herself!"

You can imagine where my parish calls took me the next day and what I passed on. And feeble though this little flicker of goodwill was, it was the beginning of the end of that church feud. Because Rowbottom was right: love *is* stronger than hate, affection *is* more powerful than enmity, hostility *isn't* a natural state of affairs—most people want to escape it and feel better when they do.

Although everyone benefited from my little experiment, the chief beneficiary was myself, because it introduced me to my favourite hobby: being a relay station for the little sparks of goodwill that otherwise

might never jump the gap that separates people.

What's the mechanism I use? Most of the time it's simply the second-hand compliment. I've trained myself to listen for any word of praise that one individual speaks about another, and to pass it on.

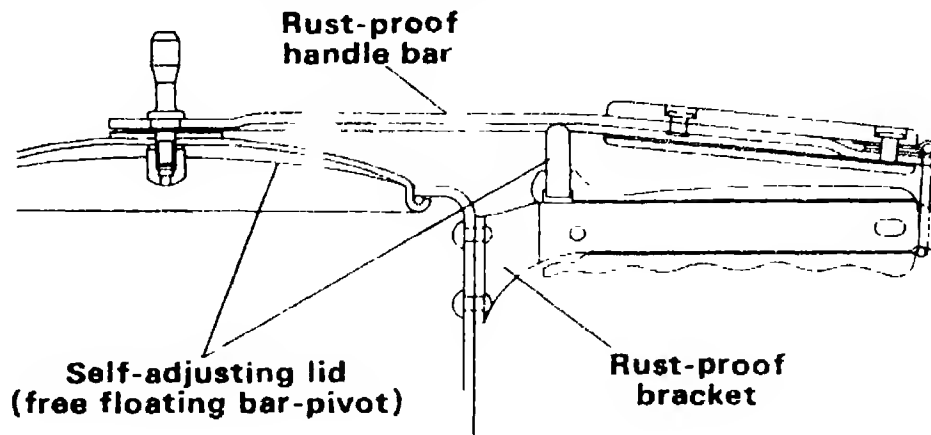
It's so easy! It can be done in casual conversation the next time you meet the person who was complimented. It can be part of a letter, or all of a hurried note.

And it's so rewarding! The originator of the friendly thought benefits from the gratitude of the person who receives it. The recipient's need for approbation—and we all have this need—is met in a happy, unexpected way. And you, the man-in-the-middle, have the satisfaction of knowing that because of your effort a little flash of goodwill has been released into the environment.

Timing it Right. It's amazing how often these little spirit-lifters seem to reach their goal when the person on the receiving end is discouraged or depressed. I once scribbled a note to a young illustrator, relaying what I'd heard an art editor say about his work. Some weeks later he replied. Before my note arrived he had given up painting. "But," he wrote, "I decided that if your friend admired something I had done in the past, I could do just as well or better in the future. So I'm back at what I really want to do, free-lance painting, and this time I'm going to stay."

When someone says something

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PASS A GOOD WORD ON

pleasant to you about a third person, you are really being given a choice: you can absorb it and let it stop there, or you can deflect it to hit the real target. I have often used this principle successfully in dealing with some knotty tangle in human affairs.

Once a member of my congregation came to me with a problem. Recently he had been made chairman of a large company. Another man, a brilliant sales executive, was angry because he thought he should have had the job. "We depend on this man's sales genius," my friend said. "But he is making things terribly difficult. What should I do?"

"Look," I said to him. "For the next six months, make a point of speaking highly of this man's ability to people in your office and in your business. No matter what he does, just keep on speaking well of him. And at the end of six months, if nothing has changed, fire him!"

The experiment worked so well that when my friend retired he recommended his former adversary for the chairmanship. Why? Because goodhearted people had deflected some of the kind things the chairman said to the real target—the man himself—changing him from a disgruntled employee to a loyal friend.

Some people find it difficult to pay a compliment directly; to do so embarrasses them. Only the other day I heard a friend tell a group of

men proudly that his wife was the kindest person he had ever known. Later on, when I was able to repeat this to her, her face grew radiant. "Oh, thank you," she said. "He'd never be able to say that to me!"

Often, I think, the relayed friendly word is even more meaningful than a direct one. After all, when someone says something pleasant to you directly, it's easy to discount it as mere politeness, or even flattery. But if someone praises you behind your back, he probably means exactly what he says.

Richly Rewarding. When troubled people come to me they are often deeply despondent. The world, they feel, is full of worry and woe and there's nothing they can do. "Oh, but you're wrong," I tell them. "There is something simple and direct and immediate you can do about it. Acquire the habit of repeating any good thing, any pleasant thing, any complimentary thing you hear about someone to that person. Pass it on within 24 hours; otherwise you may forget it. The more often such little flashes of goodwill are released into the environment, the more all the pollutive emotions of fear and loneliness and hostility are diminished. You'll be astonished at how much better you will feel!"

And they *do* feel better, because pleasure-giving is the most satisfying form of pleasure-getting.



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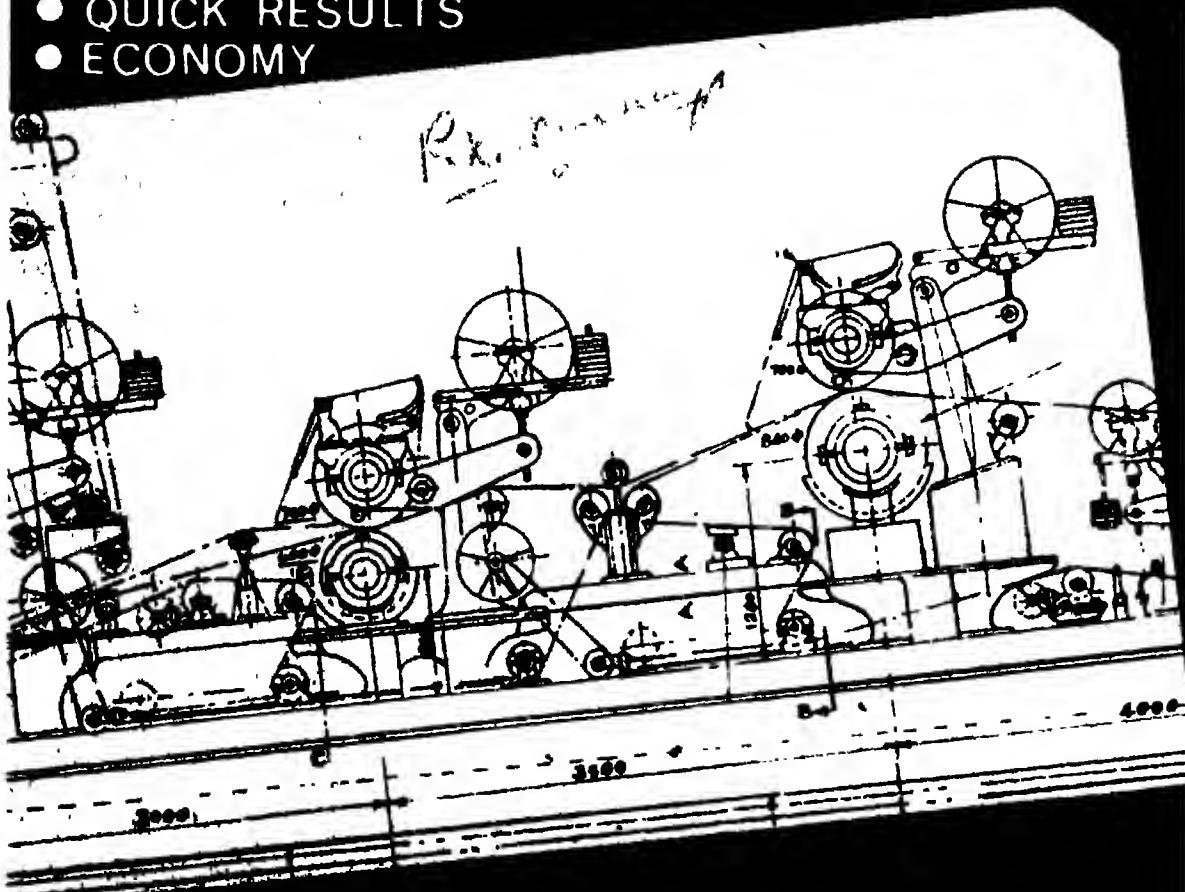
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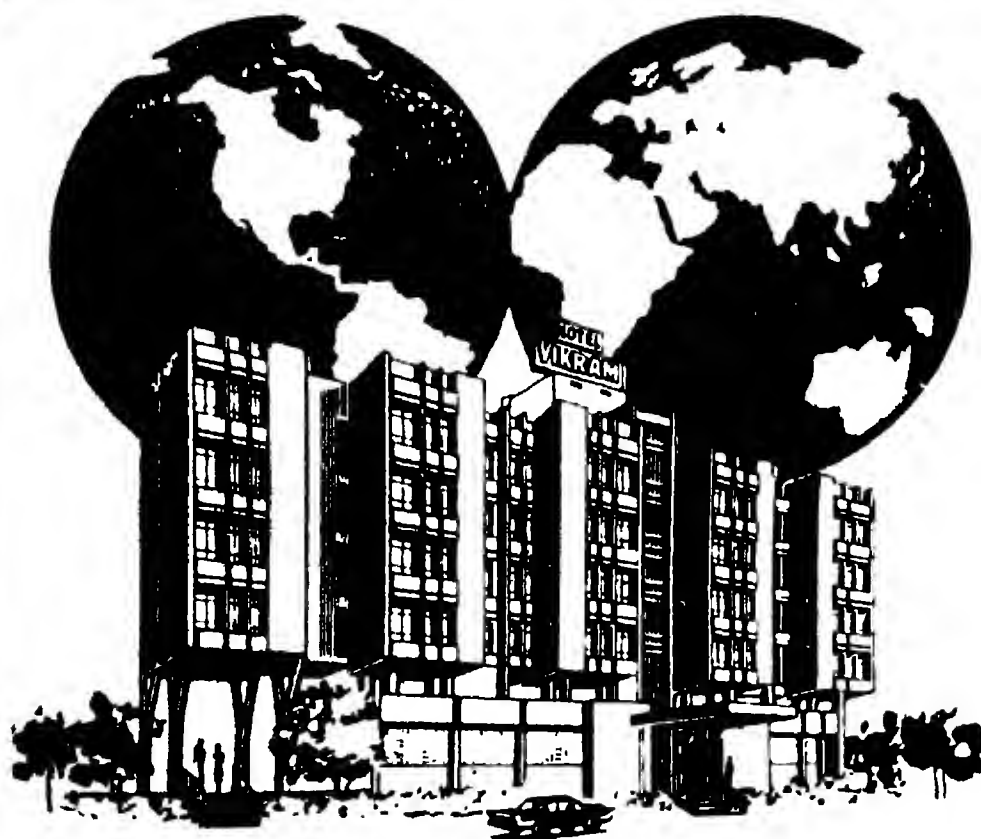
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The Summer I Wrapped Cabbage Heads

By MAGGIE SMITH

The man said, "This job requires patience. Not skill. Just patience. You sit on this low stool surrounded by hundreds of cabbages. You wrap each head in a piece of Cellophane. People don't usually stay at this job more than a month."

When I went home and told I had a summer job wrapping cabbages, my father said, "One of two things will happen. You'll love your work and think back on it with joy or you will hate your work and never want to see another cabbage."

"She'll never want to see another cabbage!" promised my brother Harry.

My father mused, "A cabbage is a marvellous creation. After its seed matures it takes up less than a square metre of space on earth.

"Cabbages live in the country and travel to town. Often they travel by jet. I doubt if you could find anyone taking his cabbages to market in a cart these days.

"Out there in the country cabbages see the lights of the city wink on at night. They see the stars and the moon and the satellites in orbit. They witness considerable.

"No other vegetable is quite so similar to the human head as the cabbage with its bold-interlocking veining system. Some smooth veined . . . some veined . . . some protruding . . .

all with character. They have a most refined and civilized appearance.

"Some cabbage leaves are blue-green . . . some yellow-green . . . some leaves are

highly curled . . . some prim stiff and proper . . . erect and sprawling.

"You'll even see red cabbages. Lucky the day you handle a red cabbage . . ."

He said it all softly, but I heard every word my father said.

And all that summer while I wrapped the cabbage heads his words and the cabbages

sustained me. I lasted three months and left only because it was time to

go back to school.

I was sorry to see that summer's work come to an end.

—*The Christian Science Monitor*

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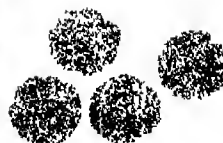
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First Voyage to the Stars

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fantastic journey ever undertaken.
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BY KARL KRISTOFFERSON

LAST March, an odd, saucer-shaped craft vaulted into the sky from Cape Kennedy on a scientific odyssey that boggles the imagination. The 260-kilogram unmanned spaceship Pioneer 10, after swinging past Jupiter, will charge out of the Solar System into the Milky Way Galaxy. Some 2,900 billion kilometres later—around the year A.D. 8,000,000—it will bore into the Constellation of Taurus and then plunge blindly into the great galactic veil beyond.

During its remarkable transit of the Universe, Pioneer will travel further and faster than any other man-made object. Nuclear-powered

instruments will return information from the very outposts of the Solar System.

Perhaps one day man himself will follow in Pioneer's footsteps. Until then, however, we can only trace its fantastic journey through the eye of the imagination. So let's climb aboard. Next stop: the stars.

It is 8.49 on the evening of March 2, 1972, and the engines of the Atlas-Centaur booster have just rammed you skywards in a fiery spectacle of light and sound. Within minutes you are hurtling away from Earth at a record-breaking 50,000 k.p.h.

For the next two hours, your craft

undergoes a series of complicated manoeuvres. Small, computer-controlled jets are fired to send the spaceship into a slow turn of five revolutions per minute. This "rotisserie" effect equalizes solar heat on the craft's exterior and allows the scientific instruments to scan a full circle five times each minute.

Next, the automatic navigation system, working in combination with delicate light sensors, executes a triangular lock on the Sun, Earth and the star Canopus, orientating the spacecraft so that its all-important antenna dish faces Earth. You are now irrevocably committed to a course computed months earlier by scientists and mathematicians.

Gulping distance at 14.5 kms. per second, Pioneer takes you past the Moon in a mere 11 hours. Eighty-three days after leaving Earth, you glide past the orbital path of Mars, eclipsing all distance marks set by U.S. and Russian spacecraft.

Space Missiles. Some 50 days later, over 190 million kms. from home, you enter the mysterious Asteroid Belt, a region of rock-like fragments and particles 80 million kms. thick, thought to consist of many shattered tiny worlds that never combined to form a planet. Although the largest, Ceres, has a diameter of 770 kms., the majority are merely boulders, rocks and pebbles trundling through space.

Collision with an asteroid is, of course, a possibility. Even the smallest such fragment, moving at speeds

of up to 29 kms. per second, could completely destroy your craft. But for once the awesome immensity of space is your ally. It is unlikely that your spaceship and some wandering object would occupy the same point at exactly the same instant. Still . . .

Twelve months after launch, Pioneer emerges from the Asteroid Belt. Earth, a staggering 664 million kms. away, has become no more than a bright star in the heavens, while distance has reduced the Sun to a tiny shimmering white disc.

Eighteen months into the mission, Jupiter hangs before you like a striped ball. Your straight-line distance from Earth is now almost 800 million kms. Put another way, it takes radio signals travelling at the speed of light—299,792.5 kms. per second—45 minutes to reach you.

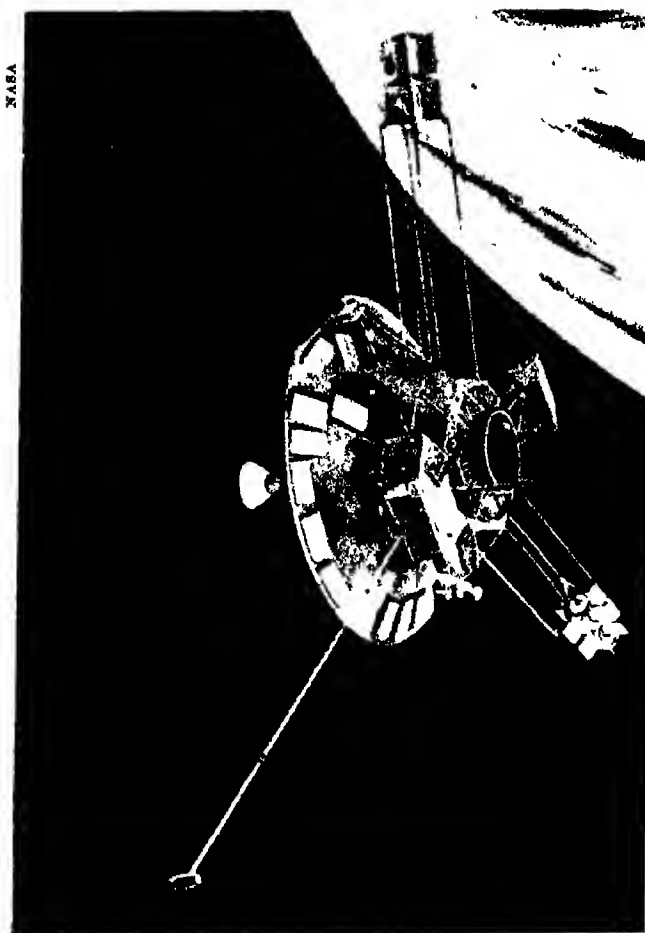
Nineteen days before the Jupiter encounter, your speed, which has dropped off to a modest 36,800 k.p.h., begins to increase again as your ship is slowly sucked in by the planet's gravitational field. At a distance of 32 million kms., Jupiter is the most conspicuous object in space. Here is the second-largest body in the Solar System, with a volume 1,300 times greater than Earth's. Against this bulk, all Earth's continents and oceans would appear no larger than Japan appears on a terrestrial globe. Jupiter's year equals 12 Earth-years, but despite its tremendous girth it rotates so rapidly that a day ticks off every ten hours.

Pioneer sweeps in from Jupiter's

sunlit side at 130,000 k.p.h., and you find it difficult to believe you are not being drawn to your destruction by the gravitational pull. You stare fascinated as the huge curvature of the planet slowly eclipses the bright and tiny Sun. For a few moments, a strange, golden twilight envelops your spaceship; then, suddenly, you are engulfed by the monstrous shadow of the planet. Yet your world is not completely dark. Intermingling rivers of coloured gases flow from horizon to horizon, the aftermath of vast disturbances in the planet's atmosphere.

What is it like down there? You can only guess. Several thousand kilometres under the planet's primordial atmosphere of helium, hydrogen, ammonia, methane and water—the chemical soup believed to have produced life on Earth 4,000 million years ago—scientists envisage a world where atmospheric pressures up to 200,000 times greater than on Earth have fashioned a terrifying landscape of solid-hydrogen continents “floating” on oceans of liquid hydrogen. From this nightmarish cauldron, gigantic eruptions spew columns of gases the size of the Pacific Ocean into the surrounding atmosphere, triggering electrical storms of unimaginable fury. It is a hellish world where men and machines cannot venture.

Moving too swiftly to be captured by Jupiter's gravity, Pioneer climbs straight up the planet's glowing face and crosses the equator into the



Pioneer 10 passes Jupiter

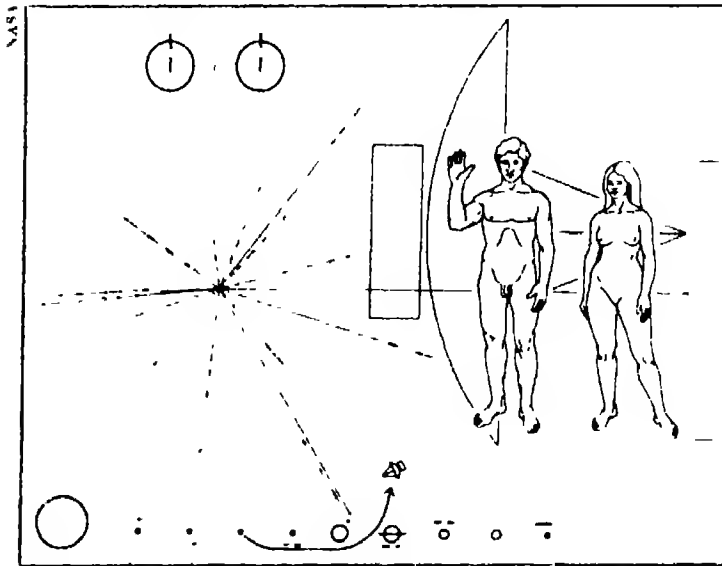
northern hemisphere. Almost immediately, you observe a bright-orange object racing towards you over the horizon from the planet's sunlit side. This is Io, one of Jupiter's 12 moons. Jupiter's night sky would be a paradise for lovers; but Jovian moonwatchers would need a slide rule to keep track. Eight of the planet's moons move in one direction; four whirl in the opposite.

Traversing the far side of Jupiter, you are likely to feel an overwhelming loneliness. The bulk of the planet now lies between you and Earth, cutting off all communication. After an hour that seems an eternity, a band of crimson light rushes at you from far ahead. The

crimson turns to pink . . . gold . . . then explodes in a burst of chromatic glory. Moments later, you are heading out of Jupiter's shadows into the light of a new Jovian day.

Almost immediately, radio signals from Earth hit the spaceship as it

pathway of gloriously ringed Saturn. Meanwhile, Pioneer is busy. It detects incoming galactic cosmic rays from sources such as supernovas (exploding stars) and pulsars (collapsing stars). Its magnetometers observe the hurricane gusts of the



Pioneer 10 carries, on this aluminium plaque, a pictorial greeting from mankind to any intelligent beings who might intercept the craft millions of years hence. Radiating lines represent the positions of 14 pulsars—cosmic sources of radio energy—in relation to our Sun. The diagrams at the foot show the Solar system and Pioneer's path out from Earth past Jupiter. From these a mathematician could pinpoint time and place of launch

emerges from behind Jupiter, and Pioneer resumes radio transmissions. Within seconds, the precious information that Pioneer has been gathering behind Jupiter is hurtling towards Earth.

Now comes a significant manoeuvre. Having added a portion of Jupiter's orbital speed about the Sun to its own, Pioneer is whipped back into space like a stone from a sling. At the top of the swing, your speed reaches a fantastic 130,000 k.p.h. Ahead: the cold, lonely domain of the outer planets, and beyond these silent worlds the greatest adventure of all—the galaxy.

Over two years and another 800 million kms. still separate you from the next milestone, the orbital

Sun's solar wind, a 1.5 million-k.p.h. blast of hot plasma that bathes the circling planets in high-energy particles. It probes the interplanetary gas for neutral hydrogen atoms, the primordial building blocks of the Sun and planets. Ultra-violet photometers keep watch on starlit cosmic dust and gas. Detectors count the incidence of micrometeoroids and cometary particles. And all the time this treasury of data flows back to Earth at the rate of several hundred bits (numerical units of information) per second.

The raw material contributed by Pioneer will keep scientists busy for years, perhaps decades. Much of it will have immediate application. For example, knowledge of Jupiter's

rapidly rotating atmosphere will lead to a better understanding of Earth's atmospheric circulation and hence its weather cycles. Some of the data will be stored, to be pondered by future generations possessing a more advanced technology. This legacy of Pioneer eventually may help unlock the secrets of creation.

Over four years after lift-off, your spaceship crosses the orbit of Saturn. Radio signals from Earth, 1,600 million kms. away, now take hours to reach you. At 2,900 million kms. from Earth, Pioneer passes Uranus. Communication ceases. The distance is too far. Another 1,600-million-kilometre step and you intersect the orbit of Neptune. Earth is no longer visible to the naked eye. The Sun has shrunk to a bright dot.

Fifteen years from Earth, Pioneer hurdles the orbit of far-off Pluto. Earth, 6,500 million kms. away, is all but forgotten. You have entered interstellar space. Behind you, the Solar System of your origin has vanished into the velvety blackness of the Universe. The Sun—your Sun—is just another twinkling star among thousands of millions.

As you race towards the beckoning giants of Taurus, your mind grapples with the awesome aspects of infinity. In this eternal sameness, your spaceship is like a tiny, complex toy floating inert in the void.

Though you are moving at a speed of 11 kilometres per second, you have no way of knowing it.

Weeks pass. Months. A year. Then one day Pioneer begins to die. One by one, its atom-powered generators deplete their supply of plutonium-238 dioxide. As the final day grows steadily closer, a profound quiet chills your soul. Now you must contemplate the eternity that yawns ahead.

Are We Alone? Your thoughts reach across the chasm of time to the beckoning stars light-years away. How many, you wonder, have solar systems like your own? Surely, in this huge bowl of stars, there must be hundreds, maybe thousands, of Earths inhabited by intelligent beings all asking the same question.

Eighty thousand centuries from now, when man has mastered his solar system or vanished as a species from the Universe, Pioneer's lifeless bulk will intrude into the great star clusters of Taurus. There, near the star El Nath, its first port of call in the galaxy, it may by chance wander into some alien solar system and be captured. Then others may examine the plaque it carries and realize they are not the only creatures sailing the cosmic sea.

Beyond El Nath? Who knows. But Pioneer is in no hurry. It has all the time there is.

NOTICE at the courtyard entrance to a Government building in London :
 "Maximum width seven feet. All vehicles exceeding this width are prohibited from entering these gates." —"Peterborough," in *The Daily Telegraph*

BY ANTONY BROWN

Expressing their gratitude in
deeds, these kindly Dutch people have
made remembrance a way of life

SOME place-names in southern Holland are unforgettable, dragging on your memory like barbed wire. A long time ago—or was it?—they featured in the news so prominently. Oosterbeek, headquarters in September 1944 of German military power in the west. Arnhem, where the First British Airborne Division tried to crush that power by capturing the Rhine bridges. Nijmegen, where the Guards Armoured Division and the 82nd U.S. Airborne Division took the bridge over the Waal river as the Arnhem attack foundered.

Another reason why you cannot forget the Second World War in this part of Holland is the cemeteries. Drive round the lanes outside Nijmegen (pronounced Nay may'

ken) and signposts will lead you to quiet fields where, in all, about 7,000 British and Commonwealth soldiers are buried. Many of them, it occurs to me, were no older than my own children are today—my own children, who would agree with most of their generation that remembrance of the dead is less important than help for the living. Less important, it seems to me, but not *unimportant*.

The thought returns as I knock on the door of a house in Hatert, a prosperous suburb of Nijmegen where the legendary Peter Vermeeren has lived for the past 37 years. I am curious to meet the man who is so well known to thousands of British visitors to the war graves.

A shortish, agile man in his early

seventies, he says he will drive me to the Jonkerbos cemetery, which lies just outside the town. He has to go there anyway: he wants to lay some flowers on an airman's grave.

"Did you know him?" I ask.

No, he says, he is acting on behalf of a Dutch family who live some 50 kilometres away in the province of Limburg. Each year since 1944 when the Limburg family saw the RAF pilot shot down over their farm-house, they have sent money for flowers to be put on his grave.

It seems to me 28 years is a long time to remember someone you never met. The Dutchman says that this is nothing unusual around Nijmegen.

We arrive at the cemetery and stroll for a while in the afternoon sun, watching the gardeners trimming the green lawns, pruning roses on headstones whose names and regiments read like a muffled drum-beat. Once this was a battlefield scarred with wrecked tanks. Now it is more like a garden than a graveyard. There is a resonance in the air, almost like music.

As we stroll beneath the yew-trees, Peter Vermeeren tells me his story. During the war he was a schoolmaster near Nijmegen. "If you haven't lived through an occupation you cannot imagine what it was like," he says, his eyes darkening.

For a moment you can sense what five years of Nazi occupation were like for a proud and courageous

Dutch people: five years in which you could be punished for listening to the BBC, five years when mothers hardly dared watch for their older children coming home in case they had been taken off for German forced-labour gangs. After the Allied landings in 1944, the liberation of Nijmegen had been a false dawn. For months the city remained in the front line, battered mercilessly by German guns.

Peter and his family had numerous British soldiers billeted with them. "So many of the brave boys we had known were killed," he tells me. "After the war local children used to put flowers on their graves and we wrote to their parents. We made many other contacts through the British Legion. That was really the beginning of the Goodhearts family."

"The Goodhearts Family?"

"A sort of society we formed in Nijmegen."

For the first time I notice a small badge in his lapel, a white cross on a red ground in a heartshape. Peter fingers the badge, explaining, "We felt it was the right symbol; a cross in a heart. It means the boys who are buried here have found a place in our hearts."

"What does the Goodhearts Family do?"

Pacing around the great crescent of graves, Peter begins to tell me. How since 1945 any Commonwealth relatives coming to visit war graves have been given what

amounts to the freedom of Nijmegen. How all their travel expenses once they set foot on Dutch soil have been paid by the Netherlands War Graves Committee. How some 9,500 British relatives have been house guests of local families in Nijmegen. If someone wants to visit a grave in another part of Holland, the Nijmegen families think nothing of driving him 100 kilometres and more.

"They gave so much," says Peter. "What we can do seems so little."

One Nijmegen woman has a tablecloth embroidered with the signatures of some 150 relatives of the fallen who have stayed with her. For 20 years the workers in one of the biggest local factories gave a percentage of their payroll to help with fares and entertainment for poor British families—canal trips to Amsterdam, coach tours of the tulip fields in the spring.

"We try to make these visits not just an occasion for mourning," Peter tells me. "For British and Dutch alike, they have been the beginning of treasured friendships."

Peter Vermeeren's proudest memory is of the 1956 visit paid to Nijmegen by Lieutenant-General Sir Brian Horrocks, wartime commander of XXX Corps which had spearheaded the Second Army's advance on the town. "There was a ceremonial parade and a service of remembrance—the sort of occasion on which you'd expect a general to wear all his medals and decorations.

But General Horrocks didn't. He simply wore the little badge of the Goodhearts of Nijmegen."

One of the things you would perhaps expect is that war cemeteries would all look the same—yet later when Peter takes me to some of the others, I sense that the feeling of each is different. There are small, wooded cemeteries like Mook, where deer graze on a hillside and 301 British and Commonwealth servicemen lie: bigger, more formal ones like the Canadian Cemetery at Groesbeek, where 2,578 Commonwealth soldiers are buried. East of Groesbeek, the wooded hills slope to meadows, then to a church spire like a pepperpot, then up to the Reichswald forest. In the distance, a car's windscreen glints. It is hard to accept that the car is on the other side of the German frontier.

"Only now are the trees beginning to grow again after the fighting," says Peter. We stand silent, looking at the faint blur of green on the distant ridge.

"What about German war graves?" I ask.

Many of the Germans who fell here were buried in their own country, he tells me, but there is a vast German cemetery at IJsselstein in Holland, where more than 30,000 German soldiers lie buried. When a British war widow visited it, she looked at it for a long time, then turned to Peter. "Now," she said, "there is no more hatred in our hearts."

From Groesbeek Peter takes me to Oosterbeek, on the outskirts of Arnhem, where men of the First British Airborne Division lie buried. We stroll about the quiet lawns, then go to one of the brick buildings by the cemetery entrance, where the register of names of those buried here is housed.

As we browse through the books of names, a car draws up. A family of Dutch people—young couple, two children—get out and walk towards the cemetery. Moving reverently between the graves, they stay for a quarter of an hour while their children play in the car park. As they leave, the man goes into the building and writes in the visitors' book, kept in a box next to the one with the names of those who are buried. "*Dank voor alles,*" I read.

THIS ARTICLE IS BASED ON A CHAPTER IN THE ALTH
© 1970 THE ROYA

"Thank you for everything." And another, "Our liberators will never be forgotten."

I also glance over some of the comments made by British families. "Only by seeing can one believe the beauty and peace here," writes one Norwich woman. "Our son is not buried in a foreign land," says another, "but among friends."

To help the living *and* to honour the dead. As I say good-bye to Peter, my questions about remembrance have been answered. Freedom began here not only for my generation but for my children's. Here and in all the lands where those who fought for it lie buried.

As the years go by, these places will have a new and continuing purpose—to remind future generations that it must not happen again.

A BOOK "RED FOR REMEMBRANCE" (HEINEMA

Did You Hear . . .

. . . about the taxpayer's wristwatch—it wrings its hands every hour.

—Tiny Kaplan quoted by Bill Kennedy in Los Angeles *Herald Examiner*

. . . about the psychiatrist who specializes in very insecure people—he has a couch with a safety belt.

—Robert Orben

. . . about the new miracle drug that has no side-effects—that's the miracle.

—Neil Brown quoted by Bob Talbert in Detroit *Free Press*

. . . about the latest peek-a-boo gown—it's a dress that isn't all there for women who are.

—Robert Orben

. . . about the fellow who planned to see a horror movie—but the price scared him away.

—Bill Copeland in Sarasota, Fla., *Journal*

. . . about the motorist whose car was recalled by the manufacturer—there was a defect in his bank account.

—Larry Mathews

. . . about the lawyer who decided it was time to have a talk with his son—about the alleged facts of life.

—Eamon Andrews, quoted by Bennett Cerf

ACUPUNCTURE

A Chinese Medical Puzzle

For centuries the use of needles
to treat human ailments has been
standard medical practice
in the Far East. How does it work?

By JOHN WHITE

THAT A NEEDLE stuck into one's foot should improve the functioning of one's liver is obviously incredible. The only trouble is that, as a matter of empirical fact, it does happen."

So wrote novelist Aldous Huxley ten years ago, in his foreword to the first edition of Dr. Felix Mann's book, *Acupuncture: The Ancient Chinese Art of Healing*. Mann described how a skilled acupuncturist can, by inserting needles into the body at various points and depths, cure, improve or arrest a wide range of afflictions: migraine, headache, ulcers, arthritis, high blood pressure, conjunctivitis, hay fever, acne, sciatica, hepatitis, asthma, haemorrhoids, angina pectoris, lumbago,

weak eyesight, tonsillitis, anaemia, insomnia. No surgery or drugs, mind you—just needles.

Today, as China's bamboo curtain begins to lift, the world is becoming increasingly aware of the Oriental therapeutic and anaesthetic treatment-by-needles. Recent visits to China by Western doctors, articles in prestigious medical journals, serious comments that acupuncture anaesthesia warrants further investigation, have all sparked uncomfortable, even angry reactions from some scientists. "It's all in the mind," they say. "Needles instead of sugar pills. Hypnosis. Traditional Chinese stoicism. Trickery." To which others respond that acupuncture is also supposed to work.

CONDENSED FROM PSYCHO (JULY 1972). © 1972 PSYCHO MAGAZINE

well on animals, which presumably are not receptive to hypnosis and placebos. And so controversy rages.

What do we actually know about acupuncture (from Latin *acus*, "needle," and *punctura*, "puncture") so far? Legend has it that the system originated in the chance discovery that arrows shot into one part of soldiers' bodies could cure illnesses in other parts. Acupuncture was known, according to tradition, as early as 2600 B.C., during the reign of Emperor Huang Ti.

More than 2,000 years later, the practice was described in the *Yellow Emperor's Classic of Internal Medicine*, and since then has been an ever-present method of healing in the Orient. Today Japan has 50,000 licensed acupuncturists, and China has about one million, of whom 150,000 are doctors.

Traditional acupuncture theory is intimately bound up with Chinese philosophy, Taoism and the *yin-yang* concept of dynamically opposing, yet harmonizing, energies in the universe—energies which are believed to wax and wane rhythmically. Man is a microcosm of the universe, and therefore also has the same regular change in his body's vital energy—variously identified as *ch'i*, *qi* or *t'chi*.

The skilled acupuncturist, using a little-known method of pulse diagnosis, determines his patient's *yin* and *yang* condition, and, if there is an imbalance, treats him for what he foresees will go wrong

if not corrected. He aims at prevention rather than cure.

Should illness actually arise, he treats the person, not the illness. A disorder is thought to be due to a malfunction or imbalance of the *ch'i* as it circulates throughout the body along 12 bilateral channels called meridians. Each meridian is associated with an internal organ such as the heart, lungs or stomach. And on the meridians are about 900 puncture points, each about two or three millimetres in diameter and carefully located on charts of the human body.

Ancient Lore. By inserting fine, stainless-steel needles (bone, gold and silver have been used in the past) into appropriate points and varying the depth and speed of insertion, the traditional acupuncturist claims that he affects the energy flow—either stimulating or dispersing it. He thus restores equilibrium to the energy system, and the patient is returned to health. (Since the points of insertion avoid vital organs, the needles do not damage the body, although they may cause a little soreness.)

Besides using acupuncture for treatment, the Chinese now use it as a means of anaesthesia. Classically, needles were placed in the skin superficially and left for ten to 30 minutes. In a new anaesthetic as well as therapeutic technique, sparked by Mao Tse-tung's exhortations to improve medicine, needles are sometimes placed deeper, up to

Acupuncture at Work

During March and April this year, a party of ten British doctors made a tour of Chinese hospitals, watching a number of major operations performed under acupuncture anaesthesia. On their return, Dr. P. E. Brown, a GP from Kent, described the party's experiences in "The Lancet" magazine.

At the Cheng Hwa Hospital in Shanghai, I was taken into the theatre to see a man in his mid-thirties, who was having a lung tumour removed. He was fully conscious and able to speak to me. There was only one acupuncture point, situated over the right biceps muscle. A needle, five centimetres long, was inserted and rotated by the "anaesthetist." She was rapidly rotating the needle for ten to fifteen seconds, at intervals of half a minute.

The patient remained extraordinarily calm; occasionally she spoke to him in a quiet voice, and he responded immediately. I was allowed

to sit with him, and ask him questions about the amount of pain or discomfort he might be feeling, but he insisted there was no pain; in fact he seemed to enjoy the segments of orange with which I fed him. He was able to chew and swallow with no difficulty.

I noticed the extreme care taken by the surgeon and the very slow speed at which he operated. Also interesting was the very slight blood-loss, which, I was told later by the surgeon, is a major advantage of acupuncture anaesthesia. I examined the patient twelve hours after the operation and he was sitting up in bed. He seemed quite comfortable, and the blood pressure and pulse were normal.

In another theatre, one of my colleagues watched the excision of the external cartilage from the left knee of a young man aged 23. He climbed unaided on to the operating-table; he was alert and co-operative. Four acupuncture needles were inserted into his left ear, and within a few minutes

five centimetres. In addition, they are constantly manipulated in a rapid, centimetre or so, up-and-down motion (about 120 times a minute) while being twirled between thumb and fingers.

In an even more dramatic innovation, electro-acupuncture has been developed primarily by a woman, Chu Lien. In this procedure, a patient receives through implanted needles a 0.5-milliamp current for 20 minutes, which will

completely anaesthetize the area to be incised.

Recent newspaper reports indicate that the list of ills which acupuncture can cure is growing. In 1968, a Chinese army medical team located the acupuncture points that affect hearing by experiments on themselves. They say they have successfully treated deafness in 90 per cent of cases resulting from a childhood disease. They offer as proof 11 children, deaf and mute prior to

the operation started; it lasted three-quarters of an hour. My colleague was allowed to talk to him throughout, with the aid of an interpreter. The patient explained, "I have only a slight tingling in my ear; my knee is numb and I can feel them pulling upon it; it is only a little sore." In this case, the four needles were connected to an electrical circuit and stimulated by a current of less than 1 milliamp.

At the Sun Yat Sen Hospital, Canton, I saw a 31-year-old woman undergo a caesarean section. Needles about 20 centimetres long were inserted from above downwards into two abdominal muscles. There were also smaller acupuncture needles in the left leg, the left side of the ribs, the left thigh, between the eyes, and in the rim of the left nostril. All the needles were wired to an electrical circuit which had a frequency of 80 discharges per minute. The patient walked to the operating-table; she remained fully conscious throughout, and she was presented with her baby, which she

nursed while her uterus was being sutured.

From discussions with an anaesthetist, I gathered that the patients make the ultimate choice as to which method of anaesthesia they will have for their forthcoming operation; about 90 per cent of them choose acupuncture. While in the ward they help to nurse patients who have experienced the method, and thereby gain valuable reassurance and encouragement. It is quite common for groups of doctors, nurses, and patients to have detailed discussions on such matters in the wards. The patient gains confidence and expects to be given technical information about his operation.

It would be very wrong, in my view, to describe acupuncture anaesthesia as "fringe medicine" or "a hoax." To me it seems that our Chinese colleagues have mastered a technique which, for the present, defies normal physiological or psychological explanation; and which warrants early and careful investigation by doctors in the West.

1969 but now completely cured. Lately, also, Chinese doctors have combined acupuncture with herbal medicine, modern drugs and doctor-patient discussions to treat mental illness. They claim that such treatment has cured 79 per cent of the inmates at a mental hospital in Hunan Province.

Similar advances in using acupuncture have been reported in the USSR, where there are said to be 1,000 specialists in the art. Moscow

physiologist G. S. Vassilchenko has successfully applied acupuncture to treat bed-wetting, sexual impotence and frigidity. But Russian acupuncturists rarely use needles. Instead, they employ electrical stimulation, massage, ointments and occasionally laser beams. Moreover, the Russians do not completely rely on the ancient charts. They have found that Caucasians have acupuncture points at slightly different places from Orientals, and that the placement may

vary even with different individuals.

European acupuncturists have been working diligently for many years to improve the theory and practice of their profession. There is an International Society of Acupuncture with headquarters in Paris. Since 1946, it has held an annual Congress, where practitioners and researchers meet to exchange and evaluate new developments.

At last year's conference, which was held in Baden-Baden, French acupuncturists displayed a prototype fibre optic device with which they are beginning to be able to detect differences in the pulse pressure wave—and thereby perhaps confirm pulse diagnosis. They have also designed a computer-like instrument into which the findings from classical pulse diagnosis can be fed. The computer then translates them into Western terms for guiding a classical acupuncturist to the organ-systems he should treat.

Meanwhile the search continues for an explanation of acupuncture that is satisfactory in Western terms. Perhaps the most promising modern theory on acupuncture anaesthesia has been offered by Ronald Melzack, a neuro-psychologist at McGill University in Montreal, and by Professor Patrick Wall, a

neuro-physiologist at University College in London. They suggest that there are certain inhibitory mechanisms in the spinal cord that allow or block the transmission of impulses which, when they reach the brain, are interpreted as pain. Under this conception, there is a possibility that certain peripheral stimuli, such as a needle prick, can eliminate pain by altering the transmission of pain-producing impulses.

Poles Apart. An electronic theory is offered by a French doctor, Dr. Georges Cantoni. Dr. Cantoni has found that people in good health have an electrical potential difference of 30 to 40 millivolts between the head and the fingertips, the head being the positive pole and the fingertips the negative pole. If one's health is less than good, this difference in potential decreases or can even get inverted. This electrical balance or imbalance is, according to Dr. Cantoni, one of the main aspects of what the Chinese mean by "the circulation of energy."

Amid the confusion of theories, one scientist offers this sane counsel: "Since the Chinese seem happy to blend Western medicine with traditional Chinese practices, should we be less willing to learn from the wisdom of the East?"

Heaven Scent

ONE Sunday last summer I was standing in front of Cologne cathedral. It was pouring with rain, but it didn't seem to bother a group of French Scouts, except two who stood next to me with glum faces. One pointed upwards, mumbling: "Eau de Cologne." —Kurt Keller, Ludwigshafen, Germany

I ALWAYS DO OUR HOMEWORK

Father's first encounter with life's most terrible quiz game

By HAL BOYLE

THERE is one nice thing I can say about the first year of secondary education: it brings a family close together.

There are only three of us in our family—me, my wife Frances and our daughter, Ann. As I see it, this is hardly enough. To get through the first year successfully, you need a family of about 12.

One would be at school; the other 11 would include a professional mathematician, a doctor, a lawyer, a judge, an engineer, a lexicographer, an anthropologist, a carpenter, a botanist, a musician and a physical-training expert.

As I remember education in my own youth, it crept up on one gradually. You learned by degrees.

This is not true any more. Now teachers pamper the child through kindergarten and primary school. But then the teachers attack in force. Suddenly the child is at secondary school. And not just the child. The whole family. Life becomes a terrible quiz game.

"Daddy, we are doing the multiplication of fractions. Please can you help me?"

Well, have you ever tried to multiply a fraction after the age of 40? It simply can't be done.

"Daddy, give me an example of a collective noun."

Well, if you mention the finance company, it turns out that isn't what the teacher meant.

Home is no longer home to me. Home is where my wife and I try to help our daughter do her homework.

Every time our local bookshop has a new set of encyclopedias, we buy them. Somehow we never seem to have all the answers.

My wife no longer has time to dust and cook and sweep and sew. The public library has become our home away from home. My wife does the daylight research. I relieve her at twilight, after work.

So far, the teacher has given our family pretty good marks. But learning is for the young. We can't take it any more.

We no longer worry about getting our daughter into a good university. Our ambition is to get her through the first vital year.

After that, we intend to retire.



Andrés Segovia, Guitar Maestro

When his fingers move
across the strings,
audiences everywhere are
spellbound by his magic

BY NOEL BUSCH

THE CONCERT stage is empty except for an ordinary piano stool and a footstool exactly 12 centimetres high. About three minutes after the scheduled starting time, a plump, mild-looking septuagenarian dressed in white tie and tails ambles on, carrying a beautiful wooden guitar.

He settles himself comfortably on the piano stool, places his left foot on the smaller stool and looks out at the audience with an expression of benign indulgence. The murmur of conversation subsides, and when total silence has lasted

perhaps 20 seconds, his well-muscled fingers begin to move across the strings. From that moment on, listeners experience a unique and unforgettable enchantment. For this is Andrés Segovia, the greatest classical guitarist in the world.

Few instruments are easier for beginners than the guitar. And, in fact, millions of people round the world, with only a few simple chords in their repertoires, now strum away and have a marvellous time. But to play the guitar well is a very different story. It is an instrument with vast range of tone and timbre, with a scope as intricate and extensive as that of the violin. To maintain his mastery, Segovia still practises five hours a day.

Segovia's main purpose in life since he was 15 has been to raise public esteem for his favourite instrument to a level comparable with his own. He has succeeded beyond his wildest dreams, and in the process has become a rich man.

Golden Discs. Most of his 30 long-playing records have sold well over a million copies each and bring him some Rs. 7.6 lakhs a year. At 79, he still gives 50 to 75 concerts a year in Europe and the United States, all of which, with no more advance promotion than a short newspaper advertisement, are sell-outs (and earn him as much as Rs. 19 lakhs a year).

Audiences at Segovia recitals are largely—like those at performances by pop groups—young people for whom guitar music seems to have a

special appeal. "I like to steal the young people away from their heroes," chuckles Segovia. But Segovia's concerts are nothing like the somewhat disorderly affairs of most pop groups. If any sound other than his music becomes audible, Segovia stops playing and waits calmly until complete silence has been restored before resuming.

On his world tours, Segovia takes just one guitar, because that is the most he can conveniently look after himself. He gives it the greatest care, carrying it to and from the concert hall and regulating the temperature of his living quarters as much for its benefit as for his own.

Even in midwinter, Segovia's first act on entering a hotel suite is to turn off the radiators and open the windows to cool the room down to what he considers a suitable temperature for his guitar. The one he uses nowadays was made for him by José Ramirez of Madrid, whom he considers one of the three best luthiers in the world. It is made from six different kinds of wood and is worth about Rs. 3,800.

Of the six months a year when he is on tour, Segovia says: "I lead a sedentary life, at 800 kilometres an hour." The rest of the year, he and his young third wife Emilia spend most of their time with their infant son Carlos Andrés, now two, in their spacious country house near Granada. And a few weeks every summer or so, Segovia gives private lessons to selected pupils in Santiago

de Compostela. Apart from trouble with cataracts—he had one operation in 1968 and another last year—he is in the best of health and spirits.

Segovia first heard a guitar as a child in his native Andalusian village, and the sound seemed to him to be one which he had been waiting for ever since his birth. He wanted to make the same sound himself, and by the time he was ten years old was already well on his way to becoming an expert player.

Discordant Note. But there was a major difficulty in his path. In turn-of-the-century Spain, the guitar was scorned as fit only for the gypsy musicians who accompanied flamenco dancers. Brought up in Granada by a well-to-do uncle and aunt, Segovia learned the rudiments of guitar technique from a flamenco-guitarist turned barber. When it came to taking serious lessons from a reputable teacher, however, there was none to be found.

At the Granada Musical Institute, where he spent most of his adolescence, Segovia taught himself to play, and in doing so worked out numerous improvements on what he had previously picked up from the barber. One was to keep the thumb of his left hand well under the neck of the guitar instead of curled around it, thereby extending the reach of the other four fingers. Another was to hold the right hand in a position vertical to the strings, thus increasing its purchase when plucking. Says Segovia: "I became

my own teacher—and also my own pupil. It is still so, only now the teacher is more nearly satisfied."

By searching music libraries for old manuscripts and by adapting the works of great composers scored for other instruments, Segovia in time acquired a classical guitar repertoire sufficient to enable him to demonstrate his firm conviction that the then-despised instrument was capable of rivalling the piano or the violin as an interpretive medium. But when a friend arranged an informal recital for him in Granada in 1910, Segovia was astonished to find that the audience, while converted to his faith in the guitar, attributed this more to his playing than to the virtues of the instrument.

First Night. Cast willy-nilly as a guitar virtuoso, Segovia continued to give recitals. Finally, in 1913, he made what he calls his "real début," in Madrid. Preparing for it, he felt that the occasion called for a really fine guitar. Since concert-pianists customarily hire their instruments, he saw no reason why a concert-guitarist should not do likewise and proposed such a deal at the shop then run by luthier Manuel Ramirez, the great-uncle of its present proprietor.

Amused by the presumption of his young and totally unknown visitor, Ramirez gave him permission to look around for a guitar he liked. Having found the best one in the shop, Segovia sat down and for half an hour rehearsed

the music he had selected for his recital.

Ramirez listened at first with surprise, then with awe. When Segovia stopped playing and said: "I like this one. What is your hiring fee for one evening?" Ramirez had tears in his eyes. "There is no fee," he replied. "The guitar is yours. Please take it, as a gift from me."

The Madrid concert was a resounding success, and his *début* as an international star took place 11 years later in Paris, before an audience packed with celebrities. His reception by both audience and critics established him overnight, at the age of 31, as the world's best guitarist.

Soft Sounds. One reason for Segovia's insistence upon absolute silence is that the notes of a guitar are more susceptible to being drowned out than those of most other concert instruments. Another is that the uproar typical of the flamenco dance-halls and taverns seemed to him indicative of precisely that disrespect for the instrument which he deplored. For this reason he learned early on to avoid giving recitals in private houses, as hostesses frequently invited too many guests and then proved incapable of keeping them quiet.

On arriving in the United States for the first time in 1928, Segovia was annoyed to find that the first engagement for which he was booked was in a private house in the remote village of Proctor, Vermont.

The mildest of men about everything except his devotion to the guitar, he threatened to cancel his tour unless he could be excused, and was only persuaded to reconsider on threats of serious legal penalties.

When he reached the modest house in Proctor where he was to stay, Segovia was given supper and then shown to his room. He put on his evening clothes and at the appointed hour came downstairs in his overcoat, grimly prepared to go wherever the concert was to be held. Only then did he learn that the concert was being held in the cottage where he was staying. Shown into the sitting room, Segovia discovered that his entire audience consisted of three people: his elderly hostess, her companion and her brother.

The hostess explained that she had attended his *début* in Paris and instantly become such an admirer that she had insisted on contracting for his first appearance in the United States, at the fee he normally received for playing to an entire concert hall. Deeply touched by this compliment, Segovia found playing for them one of the happiest evenings of his musical life.

Seventy years of playing the guitar have had certain effects upon Segovia's physique. For one thing, his hands are not of the slender, long-fingered, delicate type customarily associated with musicians. Instead, they are thick, solid and muscular. For another, owing to many years of diligent stretching, the fingers of

the left hand are about half a centimetre longer than those of the right, and the nails are cut differently.

While most flamenco guitarists pluck the strings with their finger-nails and some classical guitarists before Segovia plucked them with their finger tips, Segovia originated a system of using both tips and nails in a mixture which forms one of the nuances of his technique. To facilitate this, he lets the nails of his right hand grow about a half a centimetre beyond the quick, while those of the left hand are trimmed much shorter, so as not to impede his finger tips in stopping the strings.

In his campaign to raise the status on the guitar as an instrument, Segovia has not been content simply to demonstrate its worth through his own playing. He has simultaneously made tremendous and successful

efforts to find or adapt classical compositions for the guitar, he has convinced modern composers to write for it, and he has personally taught a new generation of classical guitarists who are following in his footsteps.

That the revival of the guitar has had its greatest manifestations in pop and folk music bothers Segovia not at all. Perhaps their electronic amplification is superfluous, but he approves of the performers because they reflect, however dimly, his own love for the guitar.

Segovia's attitude is that aesthetic beauty consists essentially of an act of love between the artist and his medium. It is perhaps this feeling that communicates itself to the audience when, in the moments of total silence that precede a recital, Segovia takes his guitar in his arms and touches its magic strings.

Dashed Expectations

WHEN a young husband arrived home, his wife threw her arms around his neck and cried happily, "Darling, great news: Soon, there'll be three of us."

"Really? When?"

"Tomorrow. You're to pick up my mother at the station at four o'clock."

—Ingeborg Schensick in *Die Zeit*, Germany

WHO says confusion isn't contagious? We have a few hectares of orchard and each year we sell the fruit. Last autumn we were expecting Mrs. Brown, a woman who works in the local ironmongery, to come and pick up some apples she had ordered. A car turned into our drive, and assuming it was Mrs. Brown, I was a little confused when a man got out. "Are you the woman who works in the ironmonger's?" I blurted out.

The man looked astonished and said, "No, I'm her wife." —Janine Lacasse

The Soothing Power of Beauty

By GEORGE MORRILL

However humdrum life may seem, loveliness is there—if only we open our eyes to it

ONE NIGHT years ago, when I was sailing on a tanker from the Persian Gulf to Italy, we ran aground in the Suez Canal. All hands slaved in the chill dark, but, as dawn approached, we were still stuck, blocking dozens of other vessels. Too exhausted to curse, we lined the rail with our coffee mugs.

Then a miracle happened. The sky crimsoned. Slowly the stars winked off. A new day rose from the desert—a blue glory that touched each grain of sand with softness and goldness and the promise of peace.

"Beautiful," someone muttered. "I'll say," came a gruff response.

Our black mood vanished. We trooped to the mess for a quiet breakfast. At ten, a tug arrived and pulled us loose.

Since then, I have noticed many times when beauty—popping up unexpectedly—has taken the sting out of a bad situation. Thomas Mann wrote: "Beauty can pierce one like a pain." He meant it can

touch chords so deep in our being that other feelings recede to misty nothingness. It is like a sudden rebirth. With a sweet jolt we are made into new people, better able to cope with the burdens of the hour.

As a sailor, I learned to mitigate the tensions of wartime by looking outwards. My private game was to see what new beauties would appear on each watch—flying fish like bright-sprinkled coins, an unusual twilight draping the waves with purple tatters, a seagull with pearly wings drawing a circle on sun-washed air.

Later, the habit of searching for beauty came ashore with me. And, through both hard times and easy going, I have tried to find something to admire in even the gloomiest day.

Sometimes it's difficult. Once, sick and discouraged, I watched March rain beat on the mud of a mountainside where I was building a home. I asked myself the question of all young men trying to make

a life of their own: *What in the world am I doing here?*

Suddenly the sun came out, warm and flaxen. Moments later, I heard a shout. High above, on a ledge, stood my farmer-neighbour, Richard Bradley, waving his stick. "Come on up," he shouted.

Side by side, we drank in the smiling, dew-fresh valley. Birds chattered. A distant tractor *phak-phak*ed. For hundreds of metres new foliage glinted like green froth. "Ten minutes of this," the old farmer said, "will carry a soft man through a hard week."

At the time he was in his seventies, his knuckles swollen by 60 years of labour. He had barely survived in the milk business. He had buried a beloved daughter. He had fought blizzards, cow-pox and taxes. Now he was showing a newcomer the restorative power of beauty.

First Inkling. When I was a boy, I was under family orders to visit my Great Aunt Ida, who was in a near-by hospital with a broken hip that would never heal. On my first visit, her ancient, parchment face crinkled with pleasure.

"You've made my flowers blossom," she said, pointing to some fuchsias with tiny violet petals. I stayed a dutiful half-hour and left without a glance at the flowers.

Each time I dropped in thereafter, she mentioned the flowers—their good or bad health, their varying shades of mauve or amethyst. Meanwhile, I grew fascinated by the

alert old lady. She had watched my grandfather march off to war. She had seen a brilliant son collapse in a mental institution. Her husband had been killed by a car. Now she was doomed never to walk again.

But, somehow, she seemed triumphant. One afternoon she revealed the secret of her strength. "When I was a girl, I walked to school along a country lane," she said. "I found that if I looked at something beautiful *first thing* in the morning—a wild rose or a silvery brook—it would last me through anything dull or sad that happened the rest of the day."

Such childhood alliances with beauty shore up one's defences against the slings and arrows of later life. So it was with the philosopher-flier, Antoine de Saint-Exupéry. One night his plane was forced down in the Sahara. Alone, facing death, he lay in the sand and let memories of beauty swarm over him.

"They came to me soundlessly, like the waters of a spring, and in the beginning I could not understand the sweetness that was invading me. Somewhere there was a park dark with firs and linden trees and an old mouse that I loved. It mattered little that the house was far away, that it could not warm me in my flesh, nor shelter me, reduced here to the role of a dream. It was enough that it existed to fill my night with its presence."

Hours passed. Stars wheeled by. After his rescue, Saint-Exupéry was

to remember—not his danger—but this unforgettable rendezvous with a long-ago loveliness.

Most of us seldom experience such dramatic encounters with beauty. But all our lives—humdrum as they may seem—are touched continuously by rare and charming things. The trick is to recognize them.

One August evening, a family was caught in a traffic jam. Heat and weariness provoked even the parents to complain. Then someone noticed that the red tail-lights, stretching for kilometres, looked like a giant bracelet of *rubies*. Another added that the advancing headlights resembled a glittering *diamond* necklace. Finally, in surprise, the family acknowledged that this was indeed a dazzling and unforgettable sight before them.

Beauty had salvaged a journey gone sour.

Happy Accidents. How does one learn to notice such saving graces? You can train yourself to find them day to day—just as a navigator trains himself to spot channel buoys. I know a man who never allows himself to pass a playground without stopping to watch children at their happy, mysterious games. “There’s always a bit of charm—a toss of curls, or a gap-toothed grin—that sticks with you,” he says.

Another friend picks handsome stones from the road. His desk is lined with curious, rainbow-tinted

minerals that meet his eye’s need for enduring delight.

“I like to walk amidst the beautiful things that adorn the world . . .” wrote George Santayana, while renouncing ownership of any of them.

So, also, you can stroll down the years revelling in wealth without spending a thing. No one can charge you for staring in wonder at a contortion of driftwood sprawling on a beach, or at a jet plane drawing a 60-kilometre-long vapour trail through a full moon. Nor can anyone put a price on silky pollen drifting in an April park; a suspension bridge webbed in starlight; a November cloud beaded with geese.

What matter if such dreamy window shopping is often shunned in today’s rocket-propelled tempo? All the more reason for you to catch moments of loveliness as they shimmer by. Etched in your memory, they will return again and again to refresh and inspire.

Often the finding of an exquisite thing can’t be contained. Tingling with joy, we *have* to tell or show somebody. One evening the father of poet Emily Dickinson hurried to his local church and pulled the bell rope. The villagers rushed from their homes. What was the alarm? Fire? Accident? It was neither. Mr. Dickinson, overcome by beauty, was merely summoning everyone to admire a sunset too magnificent to keep to himself.

Humour in Uniform



IN South Africa, at our annual navy regatta, there was a free-for-all race. The boats were standard navy whalers, crewed by as many men as their buoyancy allowed, and propelled by oars, planks, hands, the jets of fire extinguishers—anything.

At the drop of the starter's flag, the motley gang of boats scurried across the harbour. Lagging behind at the outset was one whaler—sponsored by a helicopter-carrying destroyer—with a coxswain, four crew members and only two oars. Suddenly, its crew hoisted a neat square of canvas, tied between the oars, as a helicopter came racing down from the mother ship and positioned itself over the whaler's stern. The whirring blades created enough wind to speed the almost empty boat straight through the other astonished contestants to victory.

—Ensign J. L. L. Joubert

ONE dark morning, the men were lined up in front of the barracks and the sergeant was bawling orders to his

subordinates: "Get every blank-blank man out here on the double! Kick them out of bed! Turn the beds over! Get those men out here, and get them out this minute! I can't wait all day!"

Suddenly, out of the ranks came a voice: "Everything comes if a man will only wait."

The sergeant was enraged. "Who said that?" he roared.

"Disraeli," said the voice.

"O.K., Disraeli," bellowed the sergeant. "Fall out and wait for me in my office!"

—Norton Mockridge

LIVING in a military community seems to have a decided effect on children. Recently, a small girl knocked on the door and politely asked, "Sir, am I authorized to climb in your tree?"

—A. R. A.

As a new adviser to a Vietnamese infantry unit, I received an urgent message to get airborne over an area of suspected enemy activity. Our helicopter pilot radioed that he would land in a few minutes and keep his engine running for a quick departure.

When my jeep screeched to a halt on the flight line, I was confronted by seven closely spaced helicopters, all with engines running! I knew that my Vietnamese counterpart would begin to wonder about my ability to advise if I couldn't identify my own helicopter and had to run from one to another pounding on their doors. In desperation, I grabbed my radio and said, "Gentlemen, will the real Crusader 14 please stand up?"

After a slight pause, the third helicopter from the right gracefully lifted about two metres off the ground, then

settled back on to the pad. I dashed for it, and we were on our way.

—Captain Alfred Howes

THE COMPANY had gathered to listen to our new C.O.'s welcoming speech. "I want you men to respect me as your leader, of course," he said. "But if you've got any problems, feel free to talk with me as if I were your father."

A voice boomed from the rear: "Hey, Dad, can I use the jeep to-night?"

—W. L.

AFTER an especially boring first-aid lecture at a California air base, the instructor asked, "Now what is one symptom of brain damage?"

From the back of the room came the quick reply: "A desire to re-enlist."

—Captain Warren Searls

EARLY-MORNING rain had left us all shivering, drenched and grumbling as we lay on the firing range.

Suddenly the sun broke through the clouds. Somewhere down the line, a soldier glanced at the sky as he wiped the dampness from his face. "Look, fellows!" he called out. "A rainbow!"

Looking upwards, we saw not one but *two* beautiful rainbows arching across the misty morning sky. From somewhere came a voice edged with sarcasm: "Just as you'd expect! One for the officers, and one for the men."

—Werner T. Ziermann

THE Commanding Officer of our lonely base was notorious for his unkempt appearance, so when he appeared one morning in an immaculately pressed uniform and polished shoes, we decided that a visit by top brass from London must be imminent.

Determined not to be "caught out,"

we spent the rest of the morning scrubbing the barracks, tidying lockers and cleaning our uniforms. Then, tired but pleased, we sat back and waited.

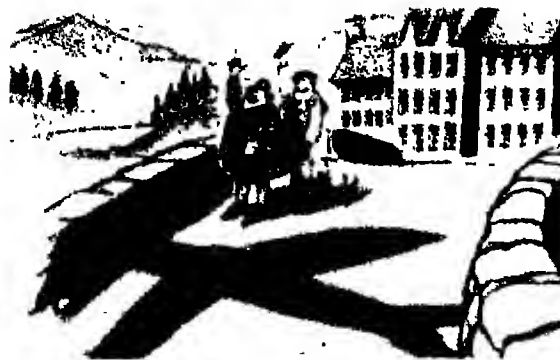
At noon a sleek black car drew up outside the C.O.'s office, and much to our surprise, an elderly lady got out.

We soon found out that the mystery V.I.P. was the C.O.'s mother.

—John Dudek

VISIBILITY had become poor during a big Nato exercise in Germany, and we were forced to fly back to base only a few feet above the tree-tops.

Fuel was running short and our navigator was not too sure where we were. Then he exclaimed suddenly,



"I recognize that bridge over there."

I breathed a thankful sigh, but my relief was short-lived. "Yes, I thought so," he added in crestfallen tones, "We've been lost here before."

—R. C. Atkinson

RECENTLY, at a ship's cocktail party, I noticed that a row of coat-hooks outside the wardroom was marked: "Officers Only."

Underneath someone had scrawled: "Can also be used for coats."

—Captain A. Hewitt



For the past two years, the United States has
been combating a new threat in
the Caribbean—a Soviet submarine base
300 kilometres off its shores

Cuban Challenge by the Red Fleet

By KENNETH GILMORE

ON May 14, 1970, a flotilla of seven Russian vessels churned along Cuba's south coast, and anchored in the calm waters of Cienfuegos Bay. The squadron consisted of a sleek 150-metre guided-missile cruiser, a rugged missile-armed frigate, an oiler, a 9,000-ton submarine tender and three submarines, one of them nuclear-powered. Amid a cluster of officials at a dockside greeting party was the smiling Russian ambassador to Cuba, Alexander Soldatov.

This was the curtain-raiser for an audacious Soviet probe just 300 kilometres from American shores. In the weeks to come, Cienfuegos (One Hundred Fires) and its deep-water bay would move swiftly into

that first circle of national-security hot-spots that give U.S. defence guardians nightmares.

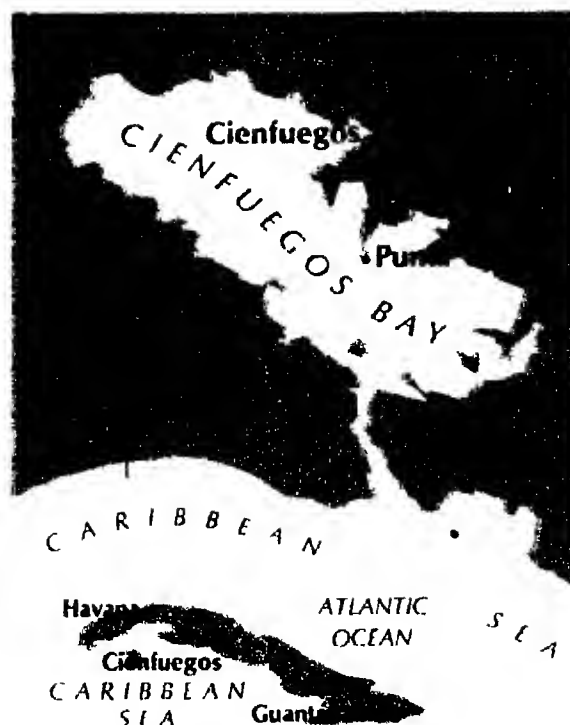
The Soviet flotilla soon departed for Havana, but by midsummer Cuban underground links to the United States told of strange things happening in Cienfuegos. In a once-exclusive waterfront section called Punta Gorda, long-standing residents were hastily removed from their homes and replaced by Russian technicians. More arresting yet, fishermen entering the harbour noticed construction activity on Cayo Alcatraz, a six-hectare island in the eastern portion of the bay. It appeared that workmen were putting up two new buildings behind a cover of newly planted trees.

From the city, 5.5 kilometres away, citizens could see the nightly glare of floodlights on Cayo Alcatraz.

In mid-August, one of the U-2 reconnaissance planes that have regularly inspected Cuba since the 1962 missile crisis was ordered to photograph Cienfuegos Bay. The film confirmed considerable construction activity on Cayo Alcatraz: several buildings were going up, plus a cement pier. While serious, this wasn't sufficient to ring many alarm bells. Perhaps, with Soviet assistance, the Cubans were only improving their port. But most U.S. officials suspected something far more menacing.

By late August, their worst fears were confirmed. Another squadron of Soviet ships had left its North Fleet naval base at Polyarnyy, near Murmansk, and was steaming towards Cuba. It included a 9,000-ton Ugra-class submarine tender—No. 922—and a gigantic Alligator-class tank-landing ship. Days later, the latter docked in Havana and unloaded two huge barges. These were then towed around the western tip of Cuba and brought into Cienfuegos Bay. On September 9, the sub tender itself entered the harbour.

Now alarm bells started ringing in the highest quarters. U.S. Navy experts knew that the tender was a floating machine shop, capable of repairing and testing Russia's newest Yankee-class, nuclear-powered, ballistic-missile submarines—up to



four at one time. The barges would fulfil another vital purpose: when the water which Soviet sub reactors use as a coolant becomes dangerously radioactive, it is pumped into such barges and hauled away (rather than being discharged by the sub at sea, where it could leave a trail for trackers).

By mid-September, further reconnaissance flights indicated that Cienfuegos Bay had become a beehive of activity. Bulldozers were at work. Two barracks, accommodating about 100 men each, had been completed, plus storage facilities. A communications centre was partly finished. A steel submarine net had been laid down near Cayo Alcatraz. There were even recreation areas, including a field for soccer—a favourite Soviet sport.

On September 25, the United States for the first time openly expressed its concern. "The Soviet Union can be under no doubt that we would view the establishment of a strategic base in the Caribbean with the utmost seriousness," Henry Kissinger, Assistant to the President for National Security Affairs, told reporters.

Since then a series of murky, often mysterious events have surrounded Cienfuegos. The barges remained in Cienfuegos Bay while the tender performed a tango of manoeuvres in and out of the harbour and up and down the Cuban coast. U.S. authorities said that no Yankee-class submarines had entered port to be serviced by a tender. Moscow denied that a base was even being built—although photographs proved that construction continued.

Meanwhile, the White House disclosed that a secret, unwritten "understanding" had been reached with Soviet officials. It purportedly precluded the servicing of Russian nuclear-missile submarines from Cuba or in the Caribbean.

"We expect them to abide by the understanding," President Nixon declared in January 1971. "I believe they will." Soon after that, the Russian tender headed home. But it is typical of the whole affair that Soviet naval squadrons have visited Cuba with increasing regularity since that time. In a clear escalation in May 1972, a Golf II class diesel submarine, carrying three nuclear

missiles with a 1,040-kilometre range, anchored off Cuba's north coast. It was the first visit by a submarine capable of firing ballistic missiles while submerged.

No one can predict with certainty what specific steps the Russians will take in the Caribbean during the months ahead—or what the U.S. reaction will be. But, based on an accumulation of data from numerous authoritative sources, some sobering conclusions can now be drawn.

1. *Just as in 1962, the Kremlin has attempted—and may attempt again—to use Cuba as a base from which to shift the balance of nuclear power.* How? With a submarine base in Cuba, the Soviets could significantly increase their submarines' on-station time near the United States. On the average, Russia's ballistic-missile subs remain on constantly submerged patrol for 60 days—but about half this time is spent shuttling the 13,000 kilometres to and from Murmansk for overhauls and crew changes. With a Cuban servicing facility, a sub operating in mid-Atlantic could stay on duty 50 days rather than, say, 32, by avoiding the 28-day trek to and from Russia. And one sitting silently at the bottom of the sea off the west coast of Florida could remain there for 56 days rather than a mere 20. Asked what the servicing of submarines from Cienfuegos could mean, U.S. Defence Secretary Melvin Laird said: "It would increase the threat by 33 to 40 per cent."

The threat, for now, consists chiefly of Russia's Yankee-class submarines. The Yankees carry 16 atomic-warhead missiles, each with a range of 2,500 kilometres. From the Caribbean, they can strike U.S. cities from El Paso, Texas, in the south-west, to Topeka, Kansas, in the mid-west, to Washington, D.C. From the Gulf of Mexico their missile coverage is even more extensive, reaching from the south-east corner of California to North Dakota to New York. At present the Russians are modifying the Yankee-class subs to handle even bigger missiles with a longer range.

No more comforting is the fact that the most sophisticated elements of America's anti-submarine warfare defences do not cover the southern side of Cuba.

2. *The establishing of a Soviet submarine base in Cienfuegos depends entirely on the presence of a tender.* If a tender is stationed in Cienfuegos, as it was for many days last year, that port becomes a submarine base in the fullest sense of the word. Remove it, and what remains is a relatively small naval facility. The tender alone constitutes a serious threat, because it can service submarines in hidden coves, or at sea if it is not too rough. But an excellent harbour such as Cienfuegos provides a mighty, additional advantage.

The result of all this: the United States has put the Russians on notice that a tender operating from Cuba

which services offensive submarines "within the harbour or at sea" would violate the pledges that Moscow made in 1962 to keep offensive missiles out of Cuba. This is the essential element in the "understanding" reached in the autumn of 1970 during "conversations" held chiefly between Kissinger and Soviet Ambassador Anatoly Dobrynin.

Details of these talks remain classified, but it has become clear that, in return for Russian assurances not to set up a submarine base in Cuba, the United States has indicated that it will not invade Cuba.

How far the Russians will try to stretch the new understanding is quite another matter. Already some experts feel that the recent May visit of the submarine, on the eve of President Nixon's visit to Moscow, violates both the 1962 and the 1970 agreements. Certainly there is no illusion in Washington about the Kremlin's aims. Says James D. Theberge, director of Latin American studies at Georgetown University's Centre for Strategic and International Studies: "The recent Soviet naval deployment to Cuba appears to be aimed at reminding the Nixon administration that the Kremlin holds some bargaining counters too—in the Americas' 'strategic rear.'"

3. *The events at Cienfuegos indicate that the Soviet Union believes it can reach into the Western Hemisphere at an ever-accelerating rate, with less and less fear of risk.*

Confident that they now have the nuclear muscle to meet any challenge, the Kremlin's leaders are seeking to demonstrate that the USSR is a major new force in the American sphere. Some sources, in fact, fear that the recent pattern of Soviet activity in the Caribbean is comparable to what occurred in the Mediterranean in the early 1960s, prior to the establishment there of a fully-fledged Russian naval presence.

Where will Moscow's next probe be, and the next? How much "strategic seepage" can be tolerated before the hemisphere's security is

irreparably neutralized, or worse? The answer lies in how willing the United States is to maintain its defensive might in the face of Russia's ominous military expansion. If America falls behind, we should be prepared to read about yet-unknown strategic surprises. For, as Senator Henry Jackson, one of the most knowledgeable men in the U.S. Congress on Soviet arms strategy, has said: "In its foreign policy, the Soviet Union is like a burglar who walks down a hotel corridor trying the handles of all the doors. When he finds one unlocked, in he goes."

Word-Play

ACCORDING to the *Australian Encyclopedia*, "Australia has contributed more than 10,000 new terms or adaptations of old terms to the language of the English-speaking world."

Australian slang presents little difficulty of interpretation, even if you do not understand every word. One can't fail to sympathize with the punter who, during a phenomenal dry spell, unburdened himself thus:

"Last big meeting I've got me shirt on the favourite because I reckon he's a snackeroo for the main event. But it rains so much he hasn't got a biscuit left in the tin in the last lap and runs so wide he knocks a pie out of a man's hand in the leger! So this time I go all out for the big lick and bet on a mud-lark, which oughta romp home on that sort of track. And what happens? We get the father and mother of a drought, the track's as dry as a sunstruck bone, and the cow runs up a lane. Fair dinkum, if a man was to toss a ten-dollar bill in the air it'd come down a summons!"

Cherish the Australian language. Its like may not be heard again.

—Stuart Gore

WHEN my neighbour who had been away from work since the birth of her children several years ago, applied for a job, she was given a long, involved questionnaire to fill in. For a long time she pondered the questions about previous employment. Finally she found the perfect answers: "What was your last job? . . . Housewife. What did you like best about it? . . . Sleeping with the boss."

—Sandra Reed

HOLOCAUST IN A FRENCH NIGHTCLUB

Within seconds, the building was an inferno. Only a few could possibly escape

By JHAN AND JUNE ROBBINS

ON THE first day of November, 1970, 146 young people died horribly in a nightclub fire at Saint-Laurent-du-Pont, France, in a building that no fire inspector would have approved. With all but two of the six exits blocked for the evening rock concert, their fate was almost certain when fire broke out.

The tragedy continues to haunt parents, municipal authorities, people everywhere. It was nobody's fault, because it was everybody's fault. Negligence, greed, rigidity, stupidity all played their part. So, in the crisis, did honour, courage, unselfishness.

Ironically, Saint-Laurent-du-Pont, a village near Grenoble with about 4,000 inhabitants, was already infamous for another tragic fire more than a century ago, when somebody

dropped a lighted lantern into a hay-cart and the whole town burned down. Hanging in the present town hall is a large painting showing the people fleeing for their lives.

Gradually rebuilt, Saint-Laurent-du-Pont now has a ski-boot factory, a metallurgical plant, a cement works and numerous sawmills. At 16, many of the young people go to work in these factories. They draw their wages, then find there is nowhere to go to spend the money. Drugs are not a problem, but boredom is. Some have motor-bikes and spend the week-ends roaring aimlessly up one road and down another. But even that palls.

Father Jean-Marie Deschaux, the parish priest, was sympathetic to the young people's restlessness. Therefore, when three local residents,

Jean-Louis Herbelin, Jean-Paul Reverdy and Gilbert Bas, proposed that an entertainment hall primarily for rock music should be built just outside the village, Father Deschaux approved. (Herbelin and Reverdy later died in the fire; Bas escaped.)

Applying for a construction permit, the first step in France's stringent three-stage building code, the Herbelin-Reverdy-Bas partnership submitted attractive plans for a large cinderblock building to be erected on slightly less than half a hectare of land. It had six exits—one at the front, one at the rear and two on each side. Adequate, certainly.

Under the second stage of the building code, a certificate of conformity must be applied for on completion of the major construction work, when Departmental authorities are supposed to check the blueprints against the actual building. According to Commandant Gilbert Plantier, head of the Departmental Fire Safety Service, the club's promoters never applied for this.

Finally, French law demands a permit to open for business. At this point such safety aspects as exit signs, access to windows, the positioning of tables, type of decorations and the installation of communications are supposed to be examined. This permit, too, was never sought.

Inside the club, called Le Cinq-Sept, balconies decorated with polyurethane, a plastic material, were hung like bird-cages on the walls. Narrow, winding staircases led to

the first floor. There were no balcony exits. To add to the rock-psychedelic impact, brightly painted plastic mobiles swayed from the ceiling. An ear-shattering, amplifying system assured freak-out noise, but there was no telephone.

Le Cinq-Sept was an instant success. Rock fans flocked to the club in hired buses from near-by towns—Chambery, Grenoble, Aix-les-Bains. On the Saturday before the fire, 700 or more had crowded in to hear a group called The Variations—700 in a building that was unsafe for *any* number of people.

On the Saturday of the fire, the attraction was a five-man group from Paris called The Storm. In near-by Les Echelles there was another rock concert, however, and many of the youngsters, angry at Le Cinq-Sept's high entrance fee, elected to go there instead.

Tragic Decision. The management of Le Cinq-Sept was annoyed in turn because groups of young people often tried to get in without buying tickets. So they sealed or concealed three exits and installed a turnstile at the front entrance (although this was not authorized). Thus, when the concert began, only two exits were open—and one was hidden by draperies. One was near the stage, the other near the bar.

On the night of the concert, 17-year-old José Espinosa, a Grenoble business-school student and an enthusiastic guitar player, went along to the Cinq-Sept at about ten

p.m. with his friend Claude Belot. Because José wanted to watch the finger action of the group's guitarist, they chose seats close to the stage.

Two pretty girls were seated near by. One was Danielle Paltot, 19 years old, a slender sociology student from Grenoble. Soon José and Danielle began talking. "He told me he was also a guitar player," she recalls, "and asked me to meet him at the Scotch Club, where he was performing the next week-end. I said O.K. Then he said he was going up to the stage to talk to The Storm."

False Security. When the fire began it looked like nothing more than a burning paper napkin. No one panicked. Danielle Paltot wasn't even aware of it. She remembers thinking that the best of the music was over and that it was time to go home. "I walked over towards the stage to collect my girl-friend and arrange to meet José later.

"Suddenly all the lights went out. A few people laughed. Some began milling around, confused. I thought it was pretty funny—the electric guitarist caught without electricity."

Still not alarmed, Danielle looked round for her friend; unable to find her, she walked to the main exit and managed to get through the turnstile. "Suddenly, right behind me, came two fellows with their clothes blazing. They started rolling on the ground. Someone started running down the road looking for a telephone to call the fire brigade."

Within seconds, the inside was blazing. Joëlle Dondey, who was helping the cashier that night, reported: "A huge flash plunged upward, then came down again and covered us all. I ran towards the bar. I knew that door was open."

A 17-year-old survivor said, "Ten friends went there—ten old friends. Only five of us came back. Some of us were sitting at the bar, when suddenly we looked up and saw a strange yellow light. I thought maybe it was the spotlight playing on the guitar soloist. Then all the lights went out and a wide yellow flame plunged down like terrible sheet lightning. I ran towards an exit. I could see people still sitting, sort of dazed. I got tangled up in the turnstile with two girls and two other chaps. We jumped over it."

Dominique Guette, also 17, recounted, "I smelt smoke and thought there was a little fire in the kitchen. When the lights went out and that big flame came down from the ceiling, I jumped up in the dark and yelled, "Fire!" I threw myself against one side exit, then another. They were barred or locked in some way. At the second exit I was smashed against the door. I thought all my ribs were broken. I dropped to the floor and crawled round a sea of legs until I made it to the turnstile. I don't know how I got through there. When I got my breath I realized there must be lots of people still inside because there weren't all that many outside. I

yelled, 'We've got to go back there!'

"Then I heard a girl say, 'There's a little stream here—we'd better wet our clothes.' Some of us tore off our clothes, dipped them in the water and put them back on. Others just waded into the stream. Then we found planks and fallen logs and began battering at the exits. We broke open one door and hauled a girl out. Her skin came off in strips in my hands. A terrible blast of heat drove us back."

All who witnessed the fire from outside said it was most unspectacular. One fireman said, "All we saw were a few small flames on the roof. It didn't look serious. We saw nobody and heard nothing. We thought everyone had run off into the woods or walked back to the village. We couldn't imagine why we had to force the doors open. When we got inside, we were horrified at the heaps of dead bodies. The man next to me almost fainted."

To help identify the victims, physiologists, dentists and fingerprint experts had to be brought in; even so, eight unidentified bodies, possibly those of foreign students or travelling hippies, had to be buried together in a mass grave.

José Espinosa's body was identified. He died not far from the entrance. All the members of The Storm group also died. An open door about three metres away could

have provided an easy escape, but it was hidden by a decorative cloth.

Extensive television and press coverage of the tragedy disturbed many. At a General Council session in Grenoble a Deputy from Isère, the department which includes Saint-Laurent-du-Pont, rose and urged, "Let the dead sleep in peace."

"We are not trying to disturb the dead. Only to wake up the living!", answered *France-Soir* in a front-page editorial.

Lesson Learned. There is reason to hope that this aim has been achieved. Remorseful authorities and angry citizens all over France have vowed "Never again!" Places of public assembly have been scrutinized for fire hazards, licences suspended, watchdog committees formed and police alerted.

Equally important, whenever people gather now in churches, town halls, dance halls, restaurants or cafés, they are more alert to possible dangers. Questions occur to them: Where are the exits? Do they open freely? What are those decorations made of? Are they fireproof? Where is the fire department permit?

At Saint-Laurent-du-Pont, 146 youngsters died because people didn't ask these questions. They assumed that everything was all right. Perhaps now neither the general public nor the authorities will ever again make the same mistake.

IMPATIENT husband to wife trying on a selection of wigs: "Will the real Edith Jenkins please get a move on!" —Harold Willes in the *Daily Mirror*



New Zealand Faces the Future

One aspect of the Common Market negotiations that disturbed many Britons was the likelihood that New Zealand, linked historically and economically to the mother country, would be left in the lurch.

In this interview her Prime Minister, the Rt. Hon. John Marshall, discusses the challenge that Britain's entry into Europe has presented his country.

Q. *Prime Minister, Britain's decision to join the Common Market is a turning point in New Zealand's history as well as Britain's. Have you any regrets about it?*

A. If New Zealand could have continued in the same old way, sending produce to Britain free and unrestricted, that might have been better for us. After all, Britain has been New Zealand's major market for more than a century. Throughout the 1960s, butter, cheese and lamb alone represented roughly 45 per cent of New Zealand's total exports, and some 90 per cent of these have gone to Britain. However, we accepted the British decision with a

good grace. We recognized that Britain, having lost an empire, had legitimate political reasons for seeking a place of influence in the new Europe.

Q. *During Britain's Common Market negotiations, you were representing a small country which didn't even have a seat at the conference table. How, then, did you manage to extract guarantees of a continuing substantial flow of New Zealand's dairy exports to Britain until 1977, and further negotiations for the future?*

A. First of all, we were able to say with firmness and conviction that the New Zealand economy depended on the British market for its

exports of butter, cheese and lamb. Secondly, we were persistent and consistent—we didn't let up for ten years. Every government in the Common Market knew the New Zealand position. Thirdly, we didn't over-state our case. We could have argued about apples and pears, which are quite important, or about grass seed and things of that nature, which were not so important. We conceded marginal points, concentrating on butter, cheese and lamb.

Q. *Was British public opinion a factor in securing special arrangements for New Zealand?*

A. Yes, a significant one. We were able to draw on the reservoir of goodwill from long associations, the innumerable personal and family links that New Zealand has with Britain, the sporting, business and trading connexions, our common cause in two world wars. All this coalesced, so that at the crucial moment, public opinion in Britain was strongly in support of our case. British people began to say: "We wouldn't wish to go into the Common Market unless New Zealand is looked after."

Q. *How will Britain's move towards Europe affect the ties between New Zealand and Britain?*

A. The links that bind New Zealand to Britain go much deeper and wider than trade and finance. These links of family and history and tradition and shared experience will remain as the basis of a continuing, permanent relationship. At the same

time, we will be building up a trading and financial relationship with the European community—largely through our established British connexions. We will be dealing with Britain as a member of the enlarged community, instead of separately, and the enlarged EEC will be New Zealand's biggest trading partner for both exports and imports.

Q. *For the time being anyway, New Zealand's trading interests in Europe appear to be reasonably well safeguarded. But what about the long-term need for new markets?*

A. We visualize and are planning for a considerable diversification of our export trade. We look forward to substantial growth in tourism, and in exports of manufactured goods, forest and fish products, and minerals.

At least 50 per cent of our export trade in the foreseeable future is likely to be to Europe. But we will continue to increase exports to the more affluent countries outside Europe.

I specify affluent countries because the kind of things we have to sell are the things which people who have money to spare can buy. So we shall look particularly to the United States and Canada, to Japan and to Australia.

Then we shall look in a more marginal way to the Pacific basin—to the west coast of South America, the Pacific Islands and South-East Asian countries, where we shall

expand the exports we are now selling there. To some extent, I also think we shall increasingly be able to export services—for example our engineering capacity, which is already being applied to projects in countries like Indonesia, Thailand and Malaysia.

Q. Do you look to Japan, where affluence already exists to a marked degree, as being a replacement for the British market?

A. Not really. Granted, we have moved our exports of mutton from Britain to Japan; we're sending about 80,000 tons of mutton there each year, and we're slowly getting in some of our lamb. But while we send about 300,000 tons of lamb to Britain, we send perhaps 6,000 tons to Japan.

I look more to a spreading of markets than a transfer of one section of our trade in a particular commodity from one market to another. The reason: the wider you can spread your markets, the less dependent you are on local circumstances, such as recessions. It is also important to strengthen our competitive position with regard to mutton, because most of it goes to Japan.

We've been developing some markets for mutton with the Soviet Union, and I welcome that because we can say to the Japanese, "Sorry we can't sell you quite as much as you wanted. Perhaps if you increase the price, you might get a few thousand tons more."

Q. Do you see any merits in the active pursuit of trade with mainland China?

A. We have been trading with mainland China in a small way for a number of years, and have encouraged our traders who have access to the Peking authorities. We do not let political considerations block trading with China any more than with the USSR or any other communist state—provided we can sell the kind of things we have at a profitable price, or buy the things we want at a competitive price.

Q. One often hears about the disadvantages New Zealand faces in attempting to remain prosperous. Do you think there are any real advantages?

A. The terms of trade have been going against us rather seriously for a number of years, and as long as we are so dependent on the export of agricultural produce, for which there is a fluctuating demand, this situation is likely to continue. However, I believe that diversifying our trade will enable us steadily to build up our economy.

Climatically, New Zealand is very fortunately placed; we are among the most efficient producers of temperate agricultural products. And our forest industries will be an increasingly valuable asset.

We are also developing certain skills which should prove useful in competitive world markets. For instance, the quality and design of New Zealand carpets, wallpaper

and crockery, are proving acceptable and competitive around the world. High-quality steel and steel alloys production may be so in the future, too. We have iron sands in large quantities, and the quality of steel now being produced from this source is high.

I mention these two industries, not because they're all we have, but to illustrate that we have raw materials which require for their exploitation skills which we possess and which our work force is capable of developing to a high degree.

Q. *Looking to the arbitrary Year 2000, what type of life do you think New Zealanders should be living by that time?*

A. I hope we will see a steadily

increasing standard of living. But more important, I believe, is the emphasis already being given to the *quality* of life.

I am happy that people are thinking that factors like more leisure, a better environment, more cultural activities and so on are as important as material gains.

We must become more efficient, increase our productivity and generate a national income sufficient to support this larger life.

I wouldn't worry, though, if we were fifteenth or fiftieth in a world economic ranking list, provided we had a standard of living that enabled us to enjoy the country we live in and the opportunities it provides.

Junior Viewpoints

OUR youngest child had to have a medical examination before entering school. The doctor asked him, "Do you have any trouble with your ears or nose?" "Yes," he replied. "They are always in the way when I take off my T-shirt."

—Mrs. Harry Wilhour

A LITTLE girl arrived at kindergarten for the first day with this note attached to her coat: "The opinions expressed by this child may not necessarily be those of her family."

—Arnold Fine in Brooklyn, New York, *Jewish Press*

I TELEPHONED my wife from the office on an urgent family matter and my three-year-old son answered. After trying in vain for several minutes to get him to fetch his mother, I became exasperated.

"What would you do if it were someone important," I asked my wife when she finally came on the line. "Would you let him prattle on like that?"

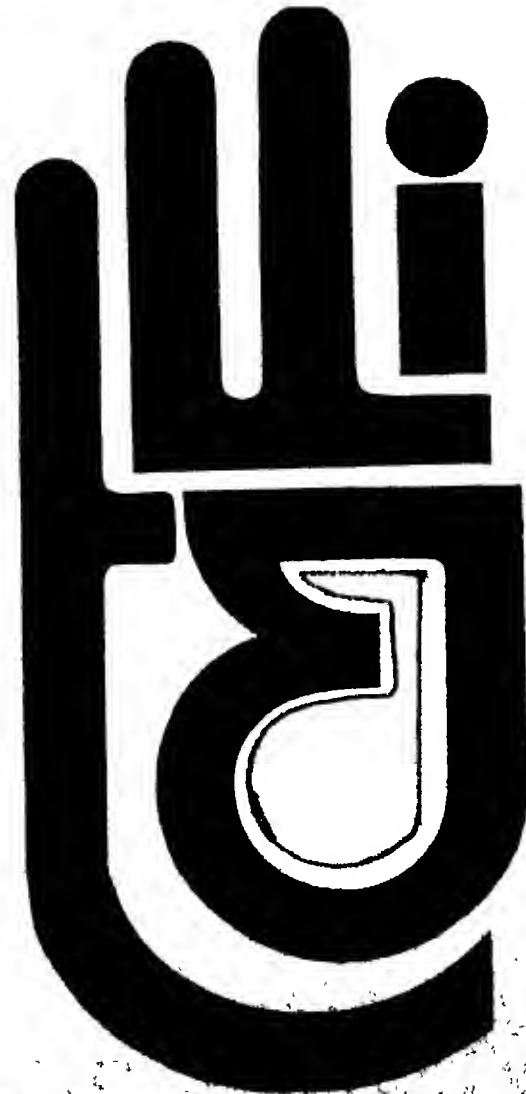
"Of course not," she said blithely, "if he doesn't know who it is, he hangs up."

—R. H., Montreal, Canada

**THIRD ASIAN
INTERNATIONAL
TRADE FAIR**

**NEW DELHI
INDIA**

**NOVEMBER 3 TO
DECEMBER 17, 1972**



asia72

**AN ADVERTISING
SUPPLEMENT TO**

**Reader's
Digest**

Working to a common purpose



The ITC pavilion at Asia '72, New Delhi, celebrates the silver jubilee of the nation's independence in its own unique way. Unique because it voices through displays and visuals, the progress of ITC and its interconnected operation ILTD, towards nation orientation during the last twenty five years.

The Theme

The burden of the story is the company's conviction that it will grow to the extent that the country prospers. The masses of facts presented at the pavilion bear out ITC's success in enmeshing its objectives with those of the nation. Success in providing employment to thousands, fair rewards and challenging careers to employees, widely distributed benefits through earnings, means of self-reliance in terms of money, men, machines and materials, assistance to small scale industries and quality, service, satisfaction to

consumers—all this comes through very clearly as the visitor shifts his eyes from one panel to another.

Scientific Tobacco Farming

An arrestingly human element of the story is the tobacco farmer. He was inspired and motivated by ILTD to take to scientific farming of tobacco in the twenties. Through unsparing efforts and almost boundless assistance of the company, he quickly emerged as one of the most progressive farmers of India long before the green revolution.

Research & Development

Research and development played a critical role in this process of modernising tobacco farming just the same way it enabled ITC to manufacture and distribute the finest qualities of cigarettes in India.

Export

It was research and development again that sharpened the

export capabilities of the group which now accounts for nearly one per cent of the total export earnings of the country. Apart from leaf tobacco and cigarettes, the export products include a widening range of non-traditional items.

Professional Management

Even a casual visitor to the pavilion would probably notice how the concept of professional management informs every activity of ITC in its pursuit of self-reliance.

Finance

Ownership is divorced from the effective operating control of the company. At the same time, Indian participation in equity has been progressively increased to the current level of Rs. 4.79 crores. Proposals are under way to increase this in the near future.

Self-reliance

Self-reliance in other areas has been achieved by almost total Indianisation of management, near elimination of imports of

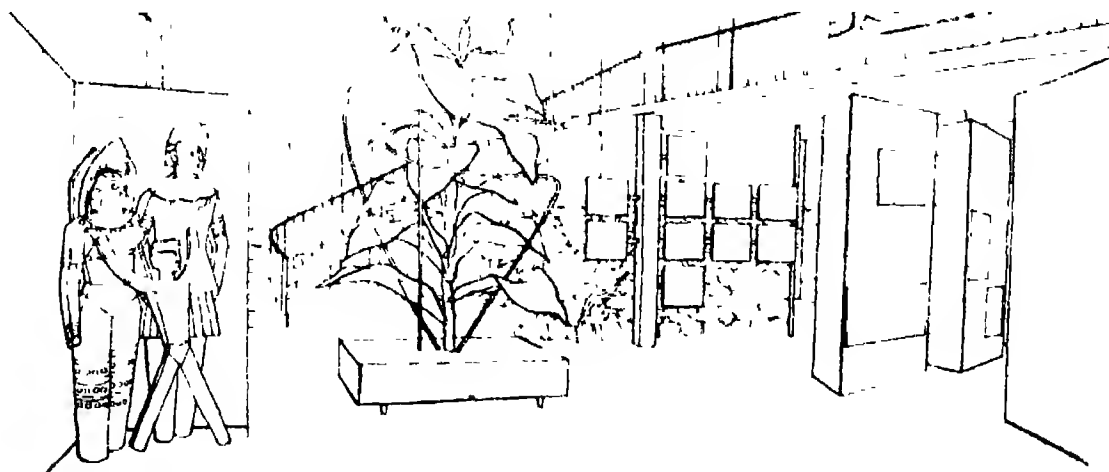
machinery and raw materials, and by generation of direct and indirect employment for close to 700,000 people that include employers, seasonal labour during tobacco season, the trade, suppliers, professional agencies, ancillary industries and several closely linked services.

Diversification

The same concern for self-reliance and employment opportunities dominates ITC's thoughts for the future. The proposed diversification projects would create as many as 2,500 new jobs. The major projects are related to export of marine products and processed foods and hotels – all designed to make fuller utilisation of the existing resources of the country and earn foreign exchange.

The Future

ITC thus hopes to be starting a new chapter in its history with the diversification projects – projects inspired by the belief that the best means of growth come from within.



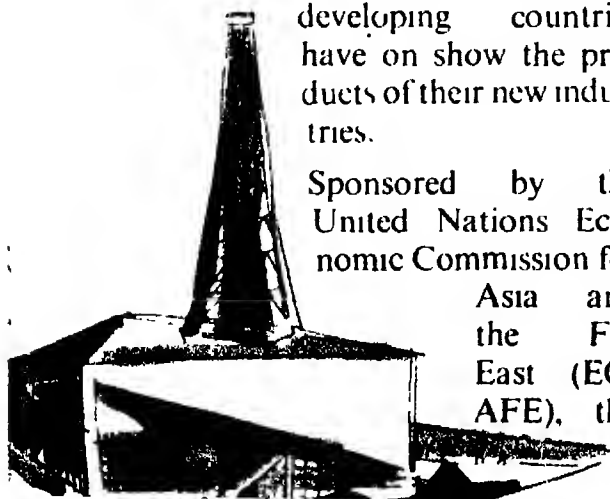
INDIA TOBACCO COMPANY LIMITED
In pursuit of progress

asia72

Asia 72, the Third Asian International Trade Fair in New Delhi (November 3– December 17), expresses a new and shared identity among Asian countries. Titled “Peace and Progress for Asia through Economic Co-operation,” the theme reflects a growing awareness of collective strength and an attempt to resolve common economic and social problems. As many as 50 countries and 1,500 trade organisations are taking part in this Fair.

Asia 72 is an invaluable opportunity to leaders in business and industry from the world to meet and exchange ideas, and strike new deals. It presents the largest collection of modern products ever to be displayed in Asia. The developing countries have on show the products of their new industries.

Sponsored by the United Nations Economic Commission for Asia and the Far East (ECAFE), the



Asian Trade Fair is held once every three years in any one of the Asian countries, but participation is open also to any country outside the ECAFE region. It is therefore international in character. The first Asian Fair was held in Bangkok in 1966 and the second in Teheran in 1969.

The prime objective of **Asia 72** is promotion of trade. In the words of Mrs. Indira Gandhi, the Fair will be “an impressive image of what India is today and what it hopes to be tomorrow.”

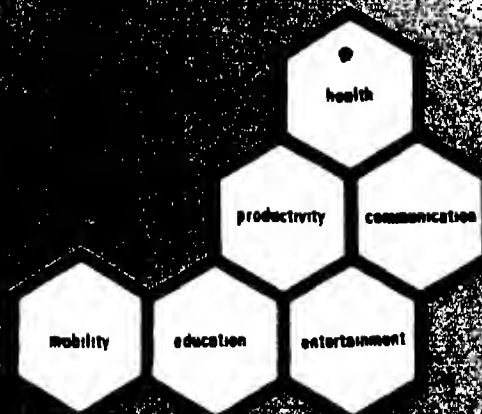
With an investment of Rs. 60 million, the Indian Government expects a business turnover of nearly Rs. 600 million. Industrial houses participating in the Fair similarly expect to receive substantial orders. The display of Indian merchandise ranges from textiles and heavy machinery to the products of the small scale sector.

Textile Pavilion

Following the tradition of celebrating the national commodity of the host country, India's

Continued on Page XVIII

**For India
and Asia,
the Philips world
of science
and technology.**



It Philips today is a name known to India's millions, as to the billions all over the world, one of the reasons for this is that in the process of its growth, right from the inception, Philips looked as much into the national perspective as into their own immediate day-to-day objectives.

The Philips philosophy of integration means the utilisation of local and indigenous resources in terms of men, material and money, yet keeping its windows open to the advancement in the wide world of science and technology. In keeping with this, the international concern has placed at the disposal of Philips India its entire store of technical know-how, experience and expertise.

Philips India, with increasing public participation, have struck their roots deep into the Indian economy and have linked their growth closely with that of the country's development.

The relationship between Philips and the continent of Asia, with India in particular, is an old one.

In India, it dates back to 1930 when a salesman sold the first Philips lamp on the streets of Calcutta. Forty-two years and eight factories later, the bond is stronger than ever.

Incandescent lamps taught Philips about glass, metals and vacuum techniques. So they branched out into radiovalves of all kinds, then to radio receivers and other electronic equipment.

The role of the radio in reaching out to the remotest villages was universally acknowledged. Philips therefore, geared on the one hand their production processes and on the other established a system of rural marketing and service-after-sales to meet this challenge. It was realised, however that it was not enough to merely piece together a number of imported components. So they decided to make components to meet this elaborate programme of integration not only for themselves but also for supply to other manufacturers both in the large and the small scale sectors.

In electro acoustics, Philips India set up a factory to manufacture amplifiers, microphones, loudspeakers and all the other equipment used in sophisticated projects such as simultaneous interpretation systems for conference and congress halls, language laboratories, etc. This factory, as all other Philips plants working to international standards of quality, also manufactures electronic measuring equipment for industries and for technical and research laboratories.

"...no matter what the industry or the product, they

acquire significance only by virtue of the part they play in human life..."

The Philips pavilion located in the North West of the Third Asian Trade Fair is a striking affirmation of a company's responses to the challenges of modernisation in both form and content. The structure takes the stylised form of a huge canopy with reinforced concrete, the roof stretching between two beams and a low-level ring beam and seems to rise out of the earth itself. The construction of the Philips pavilion employs a relatively new technique in the world and is one of the first examples of its successful implementation in India.

A mural at the entrance depicts the sun — the prime source of energy and how this energy is harnessed to serve mankind. This section leads to an auditorium where a five-minute audio visual presentation on human problems and their solutions is made alternatively in English and Hindi. This presentation of complex electronics and circuitry has been specially designed to give the visitor a comprehensive idea at a quick glance of the main theme of the pavilion.

From here the visitor moves into the main display area where six spheres of human activity have been chosen to demonstrate Philips world-wide involvement in diverse fields and its commitment to the progress and wellbeing of mankind.

Education

Philips is deeply involved in the complex world of teaching and learning, of observation, comprehension and retention. New equipment programmed to present data as clearly as possible, permit by their patient repetition, the individual student to learn at his own speed.



Communication

Living today has given a brand new dimension to communication. From ship to shore. From New Delhi to New York. From the earth to the man on the moon's surface. Even the shadow

of a misunderstanding may have fatal consequences. Philips systems keep people in touch with each other. For efficiency, greater safety, faster transport and the exchange of kindnesses. When man begins to communicate, he begins to solve problems

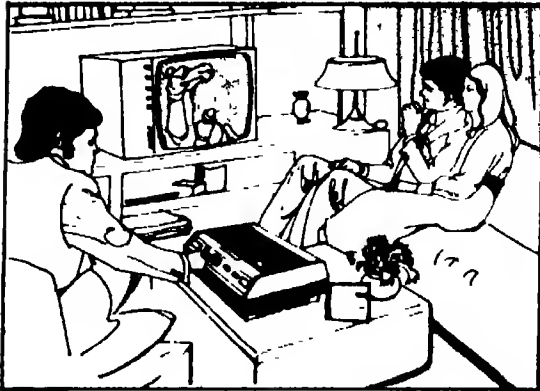
Productivity

Production in many ways guarantees life and supplies prosperity to an increasing number of people. There is much yet to be done. More energy, good raw materials, commodities are needed, as well as the know-how and equipment to prevent wastage, to increase productivity and generally to make the most of available resources. Philips reaches out a helping hand in achieving higher productivity with technical aids for faster manufacturing, precise quality control, higher reliability and greater flexibility.

Entertainment

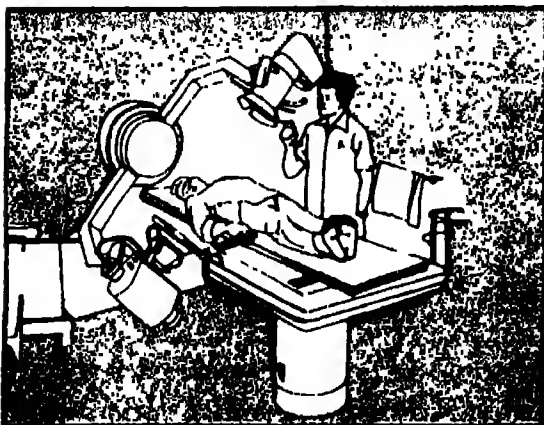
A measure of relaxation, entertainment and comfort prepares us for new action. Electronics make a rich choice of recreation possibilities available: music, television, films. Comfort in domestic chores can be increased by any number of electrical appliances and

here again is an area where the name of Philips can be frequently encountered.



Health

Medical science increasingly uses the skills of electronic engineers and other specialists trained in applied physics in that comprehensive working field: the human being. Life and health merit sincere and total attention. With their world-wide research and production capabilities Philips are a major supplier to the medical world of therapeutic, diagnostic and patient surveillance aids to aid public health.



Mobility

Control systems are essential to bring order instead of the chaos which is a serious threat as the intensity of movement through the air, at sea and on the roads increases on this crowded planet of ours. Philips can illuminate, guide, predict and control traffic situations, bring in safety and efficiency—order out of chaos.



These six themes have been illustrated with displays of products and by means of continuous films—a proof of Philips capability in making a vital contribution to society whether it be in a developed or a developing economy.

PHILIPS



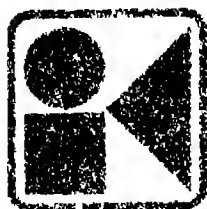
ESCORTS

The name that means a variety of products for a variety of customers. For farmers—farm tractors and implements. For construction engineers and industrial users—industrial tractors and cranes. For motorists—shock absorbers and piston assemblies. For office commuters and fun-lovers—motorcycles and scooters. For railways—automatic buffer couplers, brake and suspension systems. For medical men—X-ray and radiological equipment. For the housewife—the heating elements for domestic appliances. For exporters—a complete export service. Escorts is a government recognised export house and has to its credit exports ranging from light engineering goods to textiles, to countries such as USA, UK, UAR, Sudan, Zambia, Ceylon and Malaysia. Plus a host of products and services which take the Escorts name to almost every industry, every institution and every home.

Escorts Limited

Delhi • Bombay • Calcutta • Madras

Indian Coir



Coir has been a strand of gold for India. It has found wide acceptance all over the world and is earning valuable foreign exchange for the country. People everywhere are discovering that carpets, rugs, mourzouks, mattings and mats add colour, oriental splendour and cool comfort to their homes.

Coir floor coverings are painstakingly handwoven by Indian craftsmen. Their skill has been handed down from generation to generation.

Coir—a versatile natural fibre

Coir or Kokos or Coco fibre is a natural product extracted from the coconut husk. It is used to make mattings, rugs, carpets, mourzouks and rubberised coir cushioning as well as rope and netting.

Coir fibre is versatile. It is rot-proof, water resistant and resistant to damp and mildew. It is also cool and extremely durable.

Making coir yarn

The Coir Industry in India is largely concentrated in Kerala State.

Coir fibre is still extracted adopting age old methods. The results are excellent though it is a laborious and strenuous process.

In order to extract coir fibre, coir nets are filled with husks which are immersed in the salt waters of beautiful backwaters of Kerala. After 8 or 10 months the husk becomes soft. Fibre is then extracted by beating the husk with a wooden mallet.

Coir yarn is made either by twisting the fibre by hand or by spinning it on a set of two wheels. Coir yarn at its best, has no pith or impurity and is even in twist and colour.

Coir floor coverings

Coir floor coverings are made by hand on wooden looms. Mattings are woven just like cloth. Mourzouks and carpets are heavier and thicker and are woven on special cross weaving looms.

Coir floor coverings are great value for money. They come in rich warm colours and exotic designs created by fine artists. There

are colour and design combinations to blend with the decor of every room and to suit every taste.

The range extends from sturdy doormats, through inexpensive mattings and rugs to rich mourzouks and carpets. The unique advantage of coir floor coverings is that they are crush resistant, 100% moth-proof and above all they do not catch dust. Dust just slides through. No hard beating or expensive dry cleaning is necessary. Add to this, the economy of coir, which is among the most reasonably priced floor coverings anywhere in the world, and you get a good idea of why coir floor coverings have found markets in the U.K., the U.S.A., Australia, Canada, West Germany, Denmark, Italy and Iraq.

The Coir Board has initiated mechanisation in the coir industry by setting up the Hindustan Coir Factory at Alleppey. It has five powerlooms from West Germany. It is endeavouring to create designs, textures, and qualities, specially for foreign markets.

The Coir Board

The Coir Board in India looks after the interests of the coir industry. It was set up in 1954. Its main functions are:

- a) Promoting exports of coir yarn and coir products and carrying on propaganda for that purpose.
- b) Undertaking and assisting technical research.
- c) Collecting and publishing statistics relating to the industry.
- d) Fixing grades and standards and arranging for inspection of coir products.
- e) Improving the marketing of coir products in India and abroad and preventing unfair competition.
- f) Promoting co-operative organisations within the coir industry.
- g) Advising on all matters relating to the development of the industry.

See the wide range of coir products at the "M" Pavilion at Asia '72.

COIR *creates a beautiful indoor world*

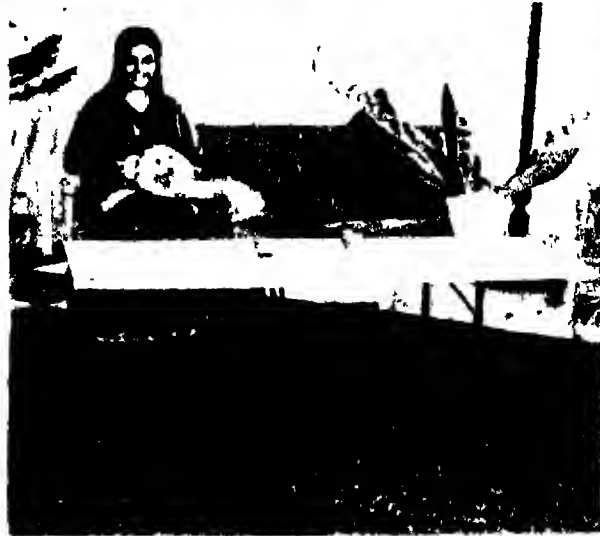
Coir for your bed



Coir at your front door



Coir in your living room



Coir for your staircase



For decor and delight
for grace and individuality . . .
for gifts and souvenirs . . . Indian
handicrafts offer something
new and modern. You have a variety
of them . . . Gorgeous carpets . . .
glittering jewellery . . . dazzling art
metals . . . richly designed textiles . . .
intricate wood carvings . . . colourful
folk paintings . . . exquisite carvings in
ivory and stone . . . master pieces
in bamboo, pith, laquer, palm-leaf,
marble. . . .

anything bright anything beautiful



*It's
indian
handicrafts*



***Turn shopping
into a treasure
buy
Indian Handicrafts***



**ALL INDIA
HANDICRAFTS
BOARD**

**visit
handicrafts
pavilion
asia 72
Nov 3 — Dec 17**

Little-known facts about a pioneer in India—Metal Box

METAL BOX, a pioneer in packaging techniques, has provided stimulus to the manufacture and marketing of packaged consumer goods tailor-made to Indian conditions. It has also provided support to numerous ancillary industries.

Since its inception Metal Box has been deeply aware of its responsibilities to the nation. That is why the Company has ploughed back, from its profits, Rs 570 lakhs i.e. 40% of total capital employed of Rs 1417 lakhs. 39% of Metal Box's share capital is Indian. Also, all the 168 executives responsible for managing Metal Box, including the Managing Director, are Indians. Besides, a programme of training schemes develops indigenous skills at all levels.

True, Metal Box is large, but it is not overpowering. The economics of package-making call for flexibility: to absorb seasonal fluctuations in demand, provide a range of essential support services to customers, and to afford sizeable research and development investments. Metal Box has

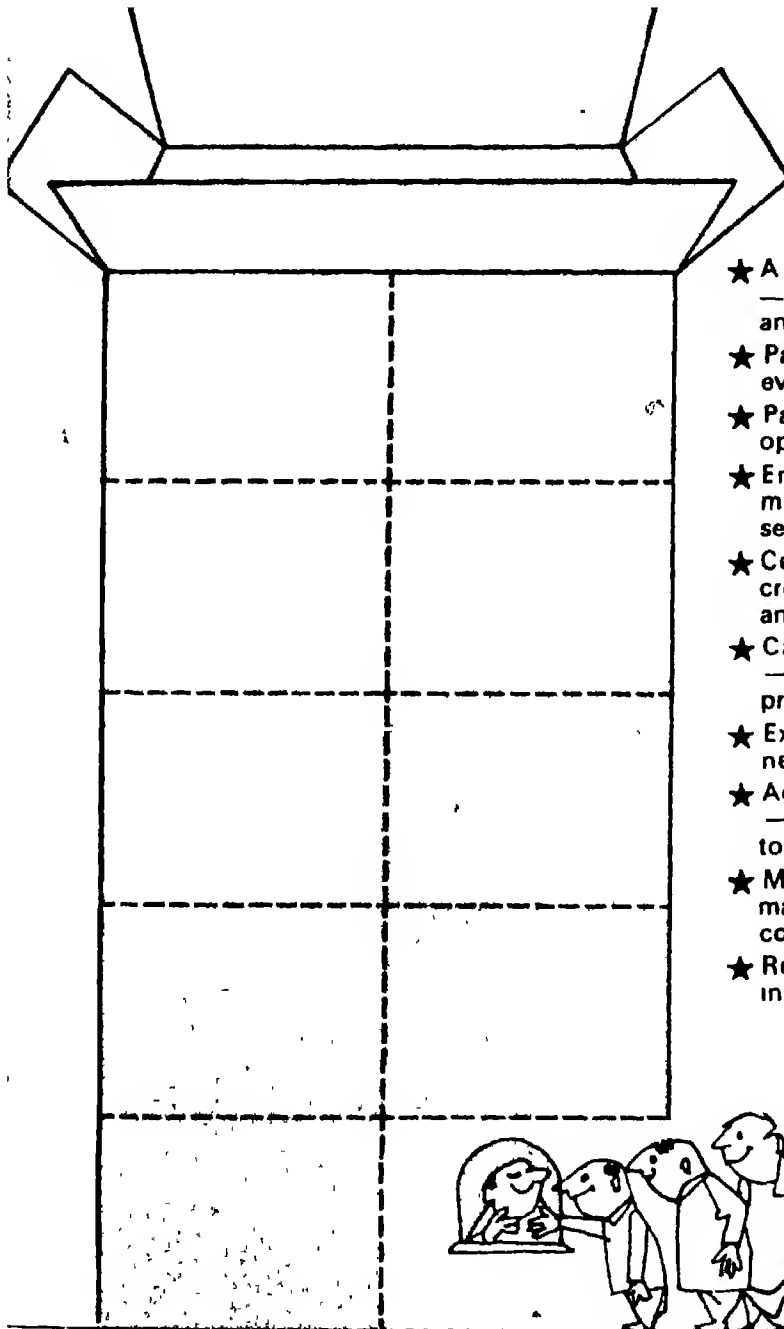
shared the fruits of its research with other package-making concerns: today Metal Box meets only 28% of India's packaging needs.

Metal Box provides direct employment to some 9,000 people. And generates indirect employment to a similar number. 85 small scale suppliers provide printing inks, dyes, lacquers, machinery components and services worth Rs 100 lakhs annually to Metal Box.

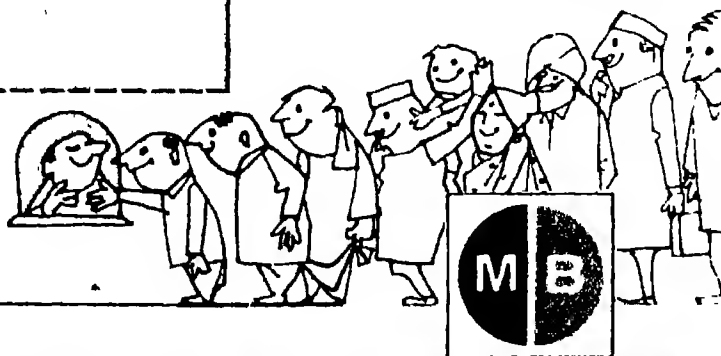
Metal Box products worth Rs 67 lakhs were exported to 33 countries in 1971/72, a 24% increase over 1970/71. In addition, goods worth Rs 1400 lakhs were exported in Metal Box packages, the value of the packages being Rs 133 lakhs.

Every year Metal Box spends Rs 35 lakhs on research and development. A full-fledged Research Department strives to improve package standards, reduce imports, costs and wastage, and explore new avenues in packaging. The latest addition to Research facilities is the Experimental Kitchen—a unique service designed to widen the scope of markets for convenience foods and specialities.

The box office is just a tenth part of our activities



- ★ A package for every need
— in metals, paper, plastics
and laminates
- ★ Package selection, development,
evaluation and testing.
- ★ Packaging machinery for
operational efficiency.
- ★ Engineering services — from
machinery adaptations to
service engineering
- ★ Central Design Service for
creativity in packaging shapes
and surface designs
- ★ Canning Advisory Service
— from cannery layouts to
process control.
- ★ Experimental Kitchen for
new canning concepts
- ★ Aerosol Advisory Service
— from product formulations
to pilot facilities
- ★ Marketing Services — from
market intelligence to
consultancy
- ★ Research & Development for
innovations in packaging.



Things are happening at Metal Box
-much more than metal boxes

"ASK JACKS" - FOR TOTAL MARKETING

What counts is the Service we offer

Right from the beginning, six decades ago, it has been our endeavour to actively participate in India's economic development. To transform natural resources into physical assets we provided the pipeline for some of the world's best equipment and know-how to reach this country.

In the rural sector Jacks supplied the machinery and equipment to realise a more bountiful yield, greatly increasing the productivity of man.

Jacks pioneered the introduction of high-speed rubber tired equipment for the construction of Dams, Irrigation Projects, Hydro-Electric and Thermal Power Projects, Steel Plants, Open Cast Mines and in almost every sphere of nation building.

With independence came opportunities for industrial growth, and Jacks were there to bring into the country the latest, know-how and sophistication in plant and machinery.

Keeping pace with the country's efforts towards progressive self-sufficiency we brought about joint ventures and collaborations whereby the very products that were once being imported are now being manufactured in India.

You will find us in the oddest of places—in Fertilizer Plants, Mechanised Municipal Sweeping, Automobile Industry, in Transport, and Communications, Oil and Water Exploration, in Refineries, in Road Building, in Shipyards, in Foundation Engineering, in far away fields, Defence Projects, Agricultural and Civil Aviation, Steel Plants, Mines, in foreign trade—You name it and we are there.

Irrespective of the degree of industrial development, not every unit that manufactures can market. This is true even amongst the most highly developed nations. And we believe that this will be so for sometime to come. This is where we come in—with the unsurpassed quality of the products we sell, backed by excellent pre-sale and after-sale service and the wide network of our domestic and international outlets—we provide the pipeline for the flow of goods and services from producer to user.

Whatever be your problems in business—DO NOT HESITATE, "ASK JACKS ABOUT IT."

ASK

JACKS

ABOUT IT

Asia 72

(contd. from Page IV)

"textile" is the theme of the Fair and receives significant promotion. A special textile pavilion depicts the role of textiles in India's economy, trade, history and culture. For years, Indian textiles have been a major commodity in seaborne trade. Currently, India's total textile exports earn Rs. 886.5 million in foreign exchange. Being the largest organised industry in the country, it is also the largest single employer with nearly a million workers.

Technology Transfer

A three-day international seminar on "Transfer of Technology" is a highlight of the Fair. About 100 experts are taking part in the seminar. An international convention on Indian engineering industries and seminars on textiles and India's trade with various countries are also planned.

Industrial Promotion Service

The United Nations Industrial Development Organisation (UNIDO) provides an Industrial Promotion Service (IPS) which initiates and assists person-to-person get-togethers among buyers and sellers. It will also help negotiate joint ventures and offer advisory services, managerial assistance and know-how. As part of its pro-

gramme, the UNIDO will organise two Industry Days, each for about 100 businessmen. Two experts will operate this service.

Trade Promotion Centre

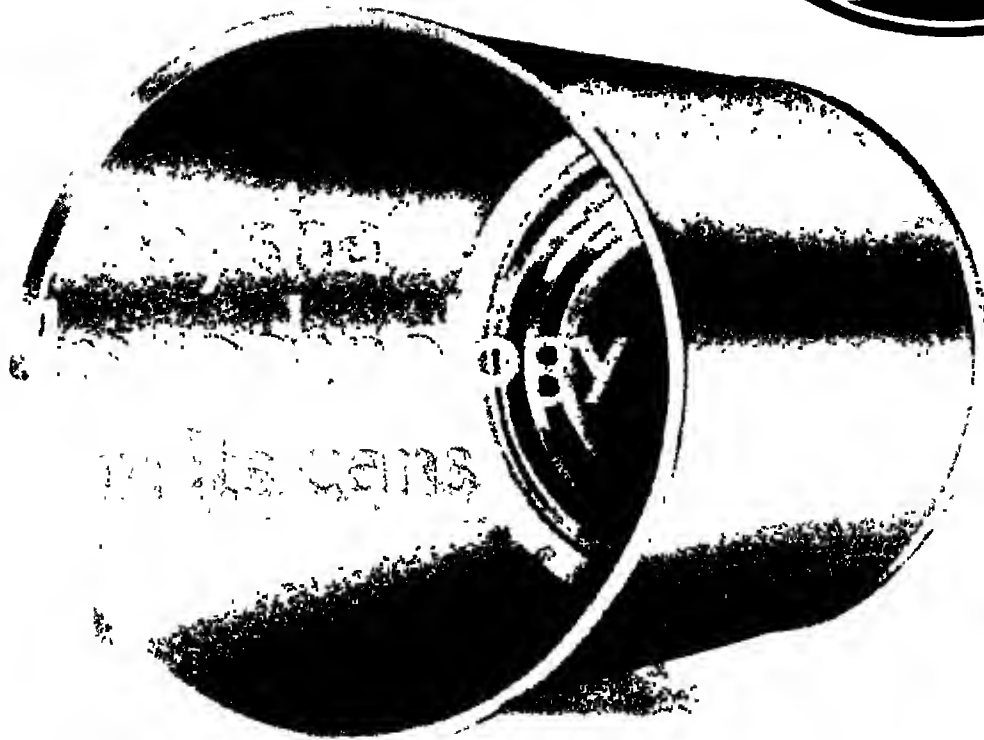
ECAFE is operating a Trade Promotion Centre (TPC) to facilitate bilateral and multilateral contacts among the exhibitors and business visitors to the Fair.

Trade at the Fair is allowed through : *i)* import licences ; *ii)* the State Trading Corporation and *iii)* sale by the foreign participant of one third of his Fair quota to consumers (subject to a ceiling of Rs. 125,000).

Permanent Complex

Covering an area of 120 acres, the exhibition ground on Mathura Road, New Delhi, today houses permanent exhibit structures occupying a third of the area and the rest is devoted to expo pavilions.





One of the secrets of Poysha's phenomenal growth during the decade has been its capacity to think new. Poysha introduced the first tiny can in 1967. It started side-seam

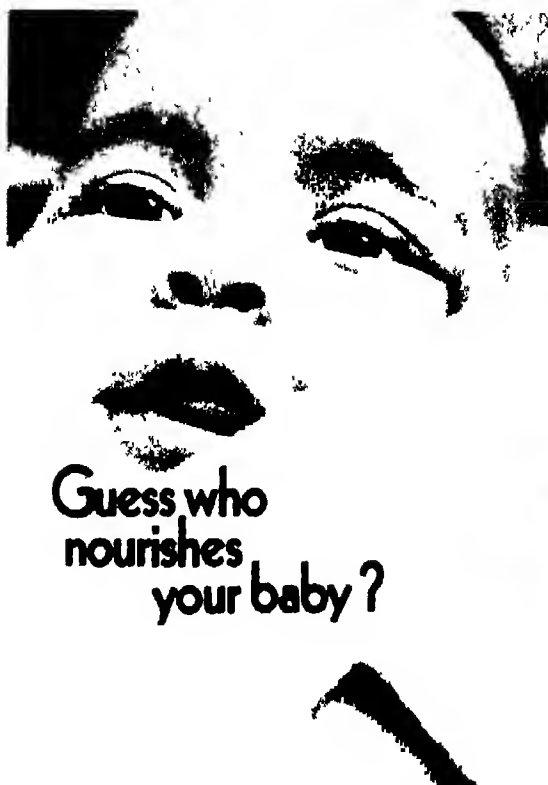
corrugated containers in 1967. This was a big step in the expansion and growth of the company. The company has been able to expand its production capacity and has been able to meet the demand of the market. The company has been able to expand its production capacity and has been able to meet the demand of the market.

The company has been able to expand its production capacity and has been able to meet the demand of the market. The company has been able to expand its production capacity and has been able to meet the demand of the market.

an equivalent weight of conventional tinplate). A little later, the welded seam can made its debut.

In addition to factories in Thane and Ghazlebad and two subsidiaries Corliffe Limited and Katre Can Company Limited, Poysha has two new factories coming up in Madras and West Bengal.

The growth is all the more remarkable when viewed against the single small factory which started in 1954.



Guess who
nourishes
your baby?

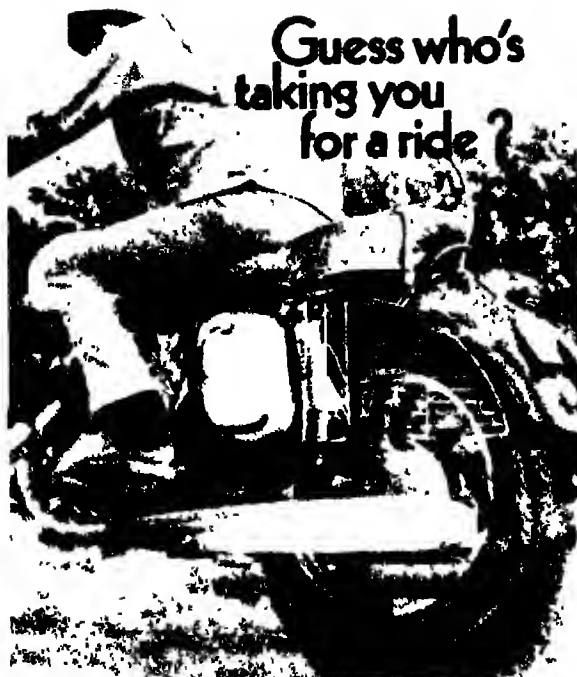


Guess who comes
between you and
your next meal?

You don't even realise it but
Poysha cans have been helping
to bring you the things you
use every day: baby foods and
other milk products, cosmetics,
vanaspati and ghee, fruits,
fruit juices, vegetables and
processed foods, pharmaceu-
ticals, fish, paints, motor-oils.
All with their quality intact.



Things you can't do w

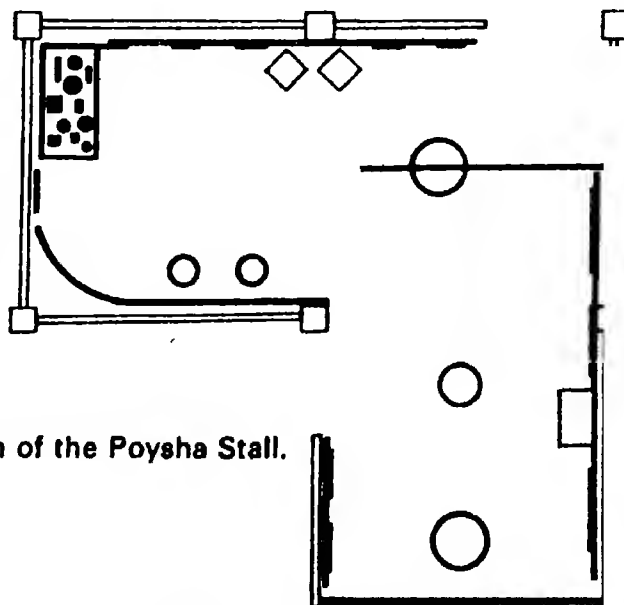


AMERICAN CAN COMPANY U.S.A.



American Can Company, one of the world's two largest can manufacturers, and Poysha, India's most enterprising container-maker, join hands to bring you better cans. This collaboration will mark a turning point in the technique of can-manufacture in India, besides greatly benefiting our food processing and food canning industries.

Visit the Poysha stall at the Indian Institute of Packaging Pavilion, The 3rd Asian Trade Fair, New Delhi, where some of the better cans to come will be displayed.



Plan of the Poysha Stall.



POYSHA INDUSTRIAL CO. LTD.

Bombay • Ghaziabad • Cochin

Subsidiaries: Kaira Can Co. Ltd., Anand • Colrige Ltd., Bombay

Asia 72

(contd. from Page XVIII)

Construction work for **Asia 72** started last year on November 14, the 82nd birth anniversary of Jawaharlal Nehru. About 50,000 workers were employed on the project to complete it in time.

The 35-metre high Hall of Nations with over 11,000 sq. metres of floor space, provides exhibit space for 20 nations. Conceived as a wall-less, pillarless structure, it is peerless in its eminence at the Fair site. Other interesting pavilions at the Fair include :

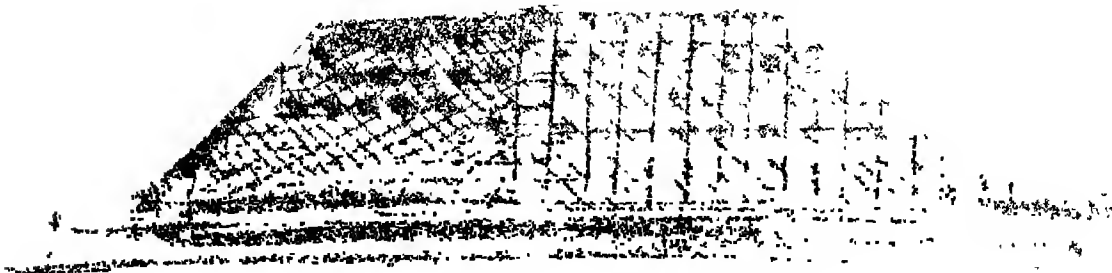
- i) "NEHRU AND NEW INDIA" This is designed to recreate Jawaharlal Nehru's vision of a renascent nation.
- ii) "RURAL INDIA" : creates a composite picture of the Indian countryside with animated folk dances.
- iii) "INDIA 72" : has a mosaic of moving images projecting the rediscovery of India.
- iv) "MOVE TO FREEDOM" : The creative response of the Indian artist to freedom as a concept is displayed with a

selection of entries to a national competition on the theme of freedom in five media : film, photography, music, painting, and sculpture.

India, Second Asian Member of IUTF :

The International Union of Trade Fairs (IUTF) which organises fairs around the world lays down, amongst others, three important conditions : i) the creation of a permanent complex with covered exhibition space of approximately 56,000 sq. metres, ii) the provision of 10 to 12 megawatts of power, and iii) all the services and infrastructure facilities are to be on a permanent basis.

With the new permanent complex set up in New Delhi, India becomes eligible for IUTF membership (Japan is the only Asian member now). As a member, India will be able to organise six commodity fairs and one general fair every year. This means that India can hold an international fair every other month in its permanent complex.



(Continued on Page XXVIII)

**Batliboi
have it all
in the bag at
asia72**



Batliboi cover the whole spectrum — from manufacture to distribution to export. In mechanical, electrical, textile and airconditioning engineering. Ask us, we've got a whole list of answers to your requirements.



Batliboi & COMPANY PRIVATE LIMITED

Forbes St., Bombay-400001

Branches • Associates • Agencies.

—ALL OVER INDIA

Come and visit us.

Today Batliboi is one of the most reputed names in Indian Industry. The firm's activities in the field of machinery and equipment span a period of 80 years, diversifying from sales to manufacture and product development...from representation of leading Indian and foreign firms to worldwide exports of the finest equipment made in India.

Laying a solid foundation. Batliboi began in Bombay in 1892, as a selling firm for motors, pumps and small agricultural equipment. From the early 20th century till the forties, Batliboi concentrated on establishing a solid base for marketing industrial machinery. With the birth of Indian Industry in about 1940, the company was able to render every assistance to indigenous enterprises, technical and financial, and to supply sophisticated equipment not only manufactured in India but also imported from the U.K., USA, Japan and Czechoslovakia. This policy of helpful participation forged lasting business relationships with Indian manufacturers whose products are now world-famous.

Batliboi go into production! In 1961, Batliboi's own Manufacturing Division was set up in Gujarat—to help meet the acute need for indigenous machine tools. The first products were milling machines and vices, designed entirely by Batliboi engineers. Next, with technical collaboration with Czechoslovakia's Strojimport, manufacture of radial drilling machines and milling machines began. Two sister concerns also set up plants, producing chucks, castings and engineers' steel files.

Batliboi's product development programme has also proved eminently

fruitful, resulting in shaping machines, precision radial drilling machines, and an extensive range of air-conditioning systems and equipment...All made to the highest world standards that characterise every Batliboi product.

Export Horizons...Unlimited! Export activities started in 1962, and Batliboi is now a trusted name abroad for up-to-date machinery, made in India to the world's most competitive standards. Batliboi is one of the larger government-recognised Export Houses in the private sector, operating with an overseas office and a world-wide network of agents. Shipments, over the years, have gone to Ceylon, S.E. Asia, Africa, Middle East, Fiji Islands, Europe, Canada, USA, the Caribbean, S. America, Australia... and the list keeps growing because of constant market exploration in countries round the world.

For Indian Industry—the finest foreign equipment. Together with marketing their own and other Indian products, Batliboi also represents many world-famous firms in India. Batliboi's comprehensive service covers planning, designing, installation and servicing in diverse fields: heavy machine tools, textile equipment, power plants, paper-making plants, special steels, wood-working machinery and control instruments.



Batliboi & COMPANY PRIVATE LIMITED

Regd. Office: Forbes St., Bombay-400001

Branches • Associates • Agencies — **ALL OVER INDIA**

MYSORE

AGRICULTURE

The agriculture/horticulture products exported from Mysore State are coffee, cashew, cardamom, pepper unmanufactured tobacco, cigarettes, beedies, cotton seed cake and processed fruits

Amongst forest products rosewood and plywood have developed good markets abroad



TEXTILES

In the "Textile" group, silk handloom fabrics, ready-made garments, coir and coir products and powerloom cloth are being exported. Further the by-product of silk industry, silk worm pupae oil and de-oiled pupae have also found worthy importers



MINING

The important items that are exported are iron and steel, tele-communication equipment, electricals and electronics, watches, sprayers, utensils, flour mills, photo-process machinery and machine tools.

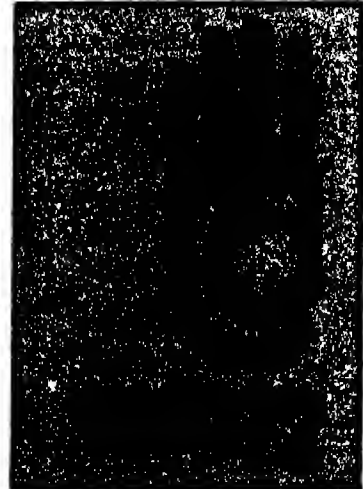
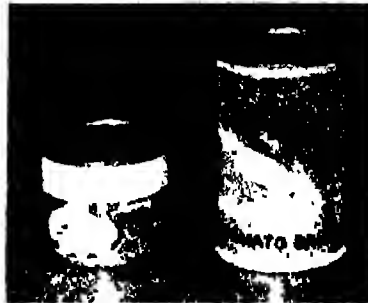


Exports from Mysore have discovered all regions of the good earth. The produce of her toil and soil span most of the world. Her textiles and yarns spin a favourable tale in the international markets. Engineering products and minerals from Mysore sail the seven seas while the dyes and chemicals have acquired a brighter share of the markets. Mysore's sea - food, live-stock and forestry products frequent far away ports. Besides, their agarbathies have found welcome acceptance of their fragrance in almost all countries.

Apart from the exports of building and ornamental stones there has been a steady rise in the demand for Mysore's chromite and polished granite

Mysore has approximately 320 km of coast-line and a fishable area of 10,000 square miles. In addition Mysore has about a million acres of inland fishing resources

Come, visit us at Asia '72. There, all our wealth to fame are on display. Your call can be the beginning of a long affair.



Issued by :

Director of Information and Tourism
Govt. of Mysore Bangalore

mcm/dit 1

XXVII

Asia 72

(contd. from Page XXIII)

National Day

A significant aspect of the national day celebrations in **Asia 72** is that the Bangla Desh national day on December 16 will mark the anniversary of Bangla liberation. The Soviet national day on November 8, similarly, happens to be closest to the anniversary of the Russian Revolution. The other national days are :

November 6 :	Federal Republic of Germany
November 7 :	Italy
November 9 :	Canada
November 10 :	Australia
November 11 :	Spain
November 13 :	German Democratic Republic
November 15 :	Hungary
November 16 :	Austria
November 20 :	Poland
November 21 :	Bulgaria
November 22 :	Chile
November 23 :	Belgium
November 25 :	Libya
November 27 :	Yugoslavia
November 28 :	Republic of Korea
November 29 :	Sudan
November 30 :	Czechoslovakia
December 1 :	Mauritius
December 2 :	Iraq
December 5 :	Thailand
December 6 :	France
December 7 :	Rumania
December 8 :	New Zealand
December 9 :	Japan
December 15 :	Nepal



The Fertilizer Corporation of India (FCI) can look back with justifiable pride on its record during the past year, 1971-72. In this period, the Trombay, Namrup and Gorakhpur units achieved their highest production figures since their inception. Compared to the previous year, these units registered a production increase of 21 per cent. What is more, the capacity utilisation of the three units was 94 per cent in 1971-72, compared to 78 per cent in 1970-71.

The Gorakhpur unit, in particular, should be singled out for its spectacular success. Against its rated capacity of 1,74,000 tonnes of urea, it produced 1,65,000 tonnes—95 per cent of its installed capacity. In the background of frequent power failures and numerous bottlenecks in the supply of essential raw materials, this achievement is indeed outstanding.

This significant progress in the past year is likely to continue in the current year; from April to June 1972, the Nangal, Trombay, Namrup, and Gorakhpur units totalled 72,000 tonnes

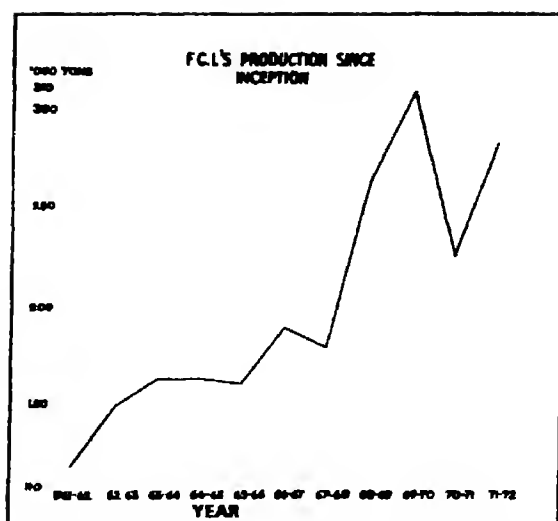
of nutrients, as against 52,000 tonnes in the same quarter of last year.

Increasing turnover

The higher production figures are naturally reflected in a greater sales turnover as is evidenced in the following figures:

Year	Turnover
1969-70	Rs. 66 crores
1970-71	Rs. 78 crores
1971-72	Rs. 95 crores

With new factories coming up at Durgapur, Barauni, Talcher, Ramagundam, Korba and the expansion



of the existing ones, the Corporation is expected to handle an estimated 5.9 million tonnes of its own production by 1975-76.

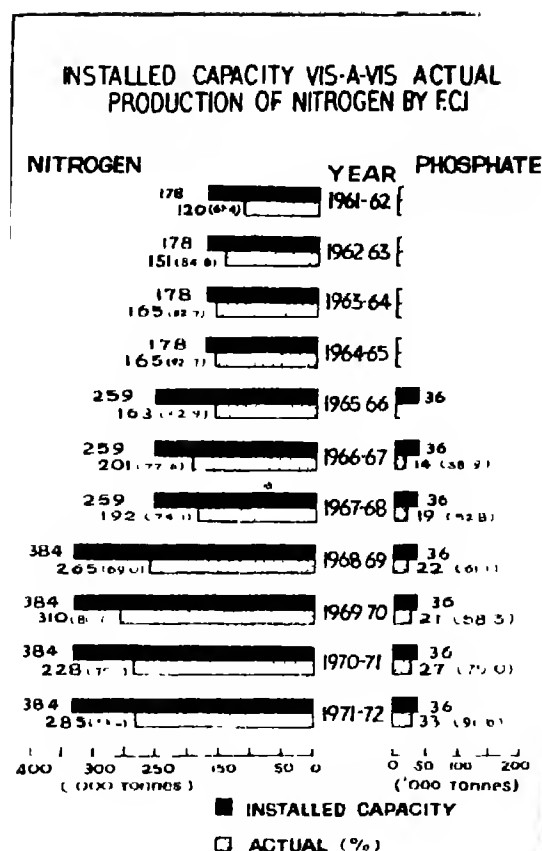
Along with an increased sales turnover, more varieties of fertilizer are being produced and marketed. These now include: ammonium nitrate phosphate, urea, ammonium sulphate, ammonium sulphate nitrate and calcium ammonium nitrate. FCI expects to add products like suphala with micronutrients, triple superphosphate and granulated NPK compound (with superphosphate as base) to this list.

Gorakhpur Expansion

The Gorakhpur plant deserves special mention. Its expansion has been so planned that the maximum available capacity of the existing equipment is fully utilised. Furthermore, only a minimum of plant and machinery has been added to it, to increase its daily rated capacity from 543 tonnes to 950 tonnes of urea.

The World Bank loan for expansion of the Gorakhpur plant is to the tune of \$10 million in foreign exchange.

XXX

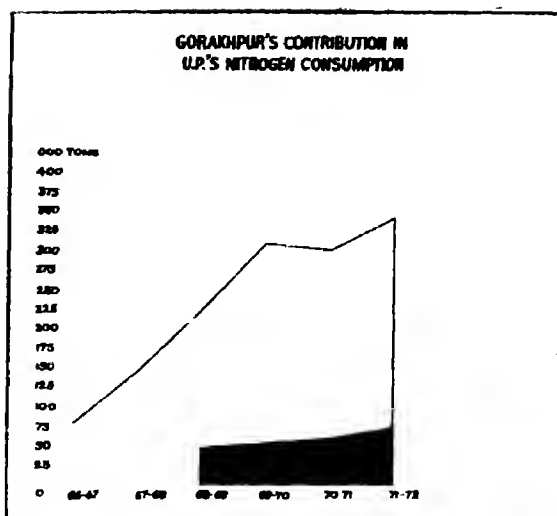


The total cost of the expansion project is estimated at Rs. 11 82 crores. It will not be out of place to mention here that the detailed design and engineering will be carried out by the Planning and Development Division of FCI, thus saving the country considerable foreign exchange.

Construction is likely to start before the end of the year and full production should be reached by the end of 1974.

Marketing

For efficient and economical distribution, the country has been divided into three zones, eastern, northern and south-western, based on the location of the various factories. Thus large quantities of fertilizer can be distributed at low transportation cost. Regional area offices have also

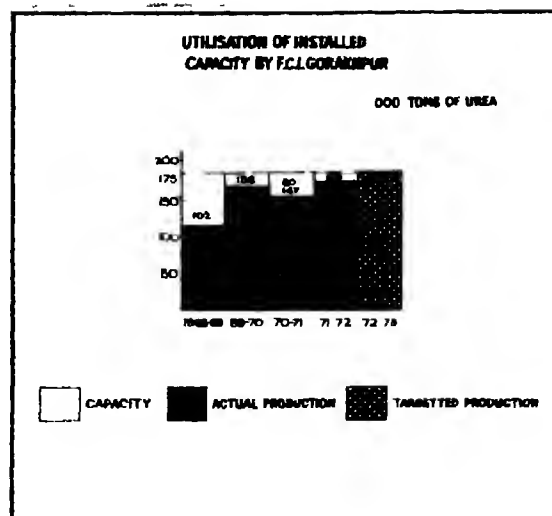


been set up near the boundaries of the States. This is essential because, agriculture being a State subject, FCI's close co-ordination with the respective State Agriculture Departments is very necessary. The area offices come under the regional office and cover a group of districts, which in turn serve as pivots in the sales efforts.

FCI's sales are made through a close network of dealers spread out all over the country. The Corporation believes in appointing a large number of dealers in order to avoid monopolistic tendencies, except in the case of co-operatives and institutional buyers.

Promotion Work

Supported by the promotional staff, the sales personnel arrange field demonstrations, organise fertilizer festivals, conduct soil testing and render advisory service to the farmers. In 1971-72, over 500 field demonstrations were conducted and almost 13,500 soil samples were tested free by the Gorakhpur Unit. During 1972-73, 180 trials (90 each during kharif and rabi) and 720 field de-



monstrations (360 each during kharif and rabi) are due to be conducted. FCI's soil testing services in U.P. will be augmented by the establishment of a static soil testing laboratory at Gorakhpur. This has a capacity to analyse 30,000 soil samples per year. FCI has in addition one mobile soil testing van. During 1972-73, therefore, FCI may be able to analyse as many as 36,000 soil samples.

Self-Employment Scheme

The country faces a major problem in the large number of educated unemployed. FCI has not lagged behind in helping them. It has given jobs to unemployed graduates and disabled jawans. The Corporation also conducts an Entrepreneurship Development Scheme (EDS) under which unemployed graduates are given free training and at the same time they are exposed to technical know-how and some aspects of marketing. After completing their training, they are appointed as wholesalers or retailers.

This scheme is now being expanded to include about 200 educated un-

employed during the current year all over the country. With 150 dealers already functioning under the EDS, by the end of the current year, the number is likely to go up to 350. In the next two years, 700 more dealers from the educated unemployed are proposed to be added so that by the end of the Fourth Plan, there will be 1,050 entrepreneurs under this scheme.

FCI also aims to offer similar jobs to disabled defence personnel.

Rice Production and Training Centre

The Corporation recently set up a Rice Production and Training Centre at Durgapur, on the lines of the International Rice Research Institute in the Philippines. A group of agronomists was sent to the Philippines to undergo training at the International Rice Research Institute. They will now train promotional and extension workers of FCI in the scientific management of rice production.

Similarly, the recently expanded Radio Isotope Laboratory at Trombay will boost the promotional efforts of the Corporation. With the help of the Radio Isotope Laboratory, FCI's promotional workers will be in a better position to handle the specific problems of the farmers and help them follow scientific methods of cultivation.

FAO Project

Two development blocks, Bansgaon and Piprauli in Eastern U.P., have been selected under a joint FAO and FFHC (U.K.) programme, FCI will be associated with this project, on which work has already started.

Conclusion

FCI does not merely produce different chemical fertilizers but also takes great pains to educate farmers on their proper use to achieve maximum production. It is, in other words, a guide, philosopher and friend to the Indian farmer. Its goal is a noble one: to make the nation self-sufficient, both in chemical fertilizers and in foodgrains.



*Mr. J. C. Pandey, Marketing Manager,
Fertilizer Corp. of India Ltd, Gopalpur*

Visit FCI Demonstration at Asia '72

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TOWARDS ECONOMIC PROGRESS

INSULAST® CABLES & WIRES

Single or multicore, armoured or unarmoured 1.5 sq mm to 1500 sq mm conforming to IS 694 1554 1596 3035 and to customer's specifications (Also available on DGS & D Rate Contract)



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'POWERLINE' A.C.S.R. & A.A. CONDUCTORS

of all sizes and constructions



GALVANISED TRAPEZOIDAL ARMOUR TAPE & WIRES

for P.V.C. cables



'POWERVINYL' PLASTIC COMPOUNDS

for cable insulation, footwear, pipes, tiles, conduits, moulded products including toxic and non-toxic P.V.C. compounds for blow moulded bottles etc



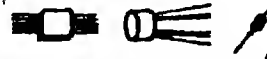
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integrated circuits, transistors, diodes. Also undertake subcontracting work for internationally reputed U.S. based firms



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ALUMINIUM ROD ROLLING

all sizes of E.C. grade ingots into all sizes of rods



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single and multi-band transistors and A.C. valve radios, amplifiers, mini fans, radio components, loudspeakers, etc



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general purpose and special types mild steel, stainless steel etc (Also available on DGS & D Rate Contract)



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a complete range of processed foods including—dehydrated and spray-dried fruits and vegetables, dairy products, concentrates, pickles, chutneys, mango, etc, slices in brine



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Tomorrow's progress Today





Indian Oxygen Ltd. —TODAY AND TOMORROW

For thirty-seven years now Indian Oxygen Ltd. has served the Indian industries. Although its name and symbol refer to oxygen only, its range of products includes other useful gases and equipment for application of such gases. These are vital not only to medical surgery and anaesthesia but in fields as diverse as lamp manufacture, food preservation, marine lighting, electronics and atomic energy besides making, cutting and joining of steel.

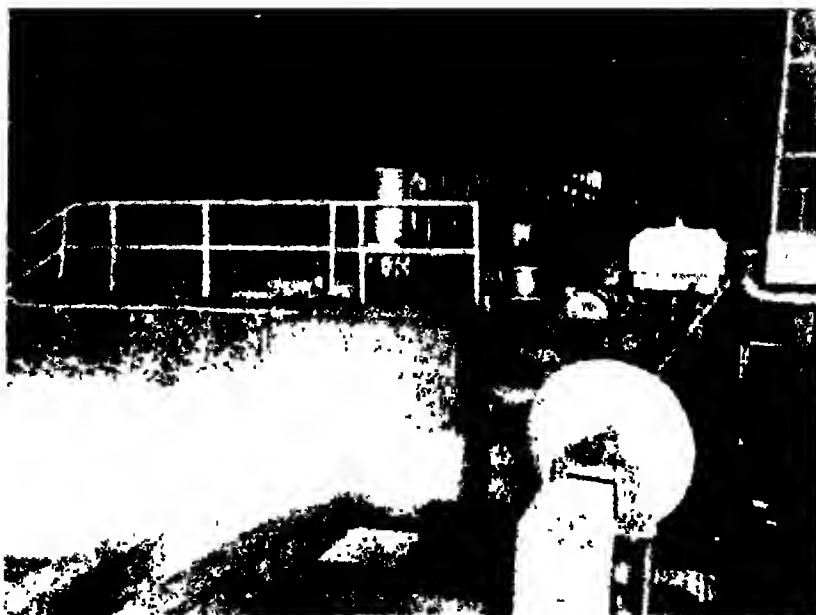
Functioning through a network of offices, plants and

depots in every major industrial area of the country, the company is entirely devoted to serve the needs of India's growing industries. In fact, a part of IOL is constantly working, developing new ideas and techniques, to play an important role in India today and tomorrow.

Oxygen

The atmosphere which covers the surface of the earth like a blanket is what we call 'air'. The air is a mixture of gases, some are present in abundant volume,

'LANCING', Oxygen in Steel Industry



some less so and some are rare. The most important of these is oxygen. It is one-fifth of the volume of the air, the rest is nitrogen.

Commercially, oxygen is obtained from the air. Air is cooled until under high pressures and very low temperature, it becomes a liquid, when the liquid is allowed to warm up, nitrogen boils off leaving liquid oxygen behind. The 'separation' of air is done now in modern plants like the IOL plant in Calcutta. Besides, oxygen and nitrogen, five other gases between them in less than 1% by volume of the atmosphere can be separated. They are argon, helium, neon, krypton and xenon, the last four are rare in the atmosphere.

It was soon discovered that if some inflammable gas is burnt in pure oxygen, a flame with a very high temperature is obtained. Consider the oxy-acetylene flame, for instance. Together they produce the hottest flame obtainable from any known combination of combustible gases—as high as 3000°C. At this temperature iron and many metals easily melt. The oxy-acetylene flame naturally came to be widely known and used wherever metals required cutting through and fusing together.

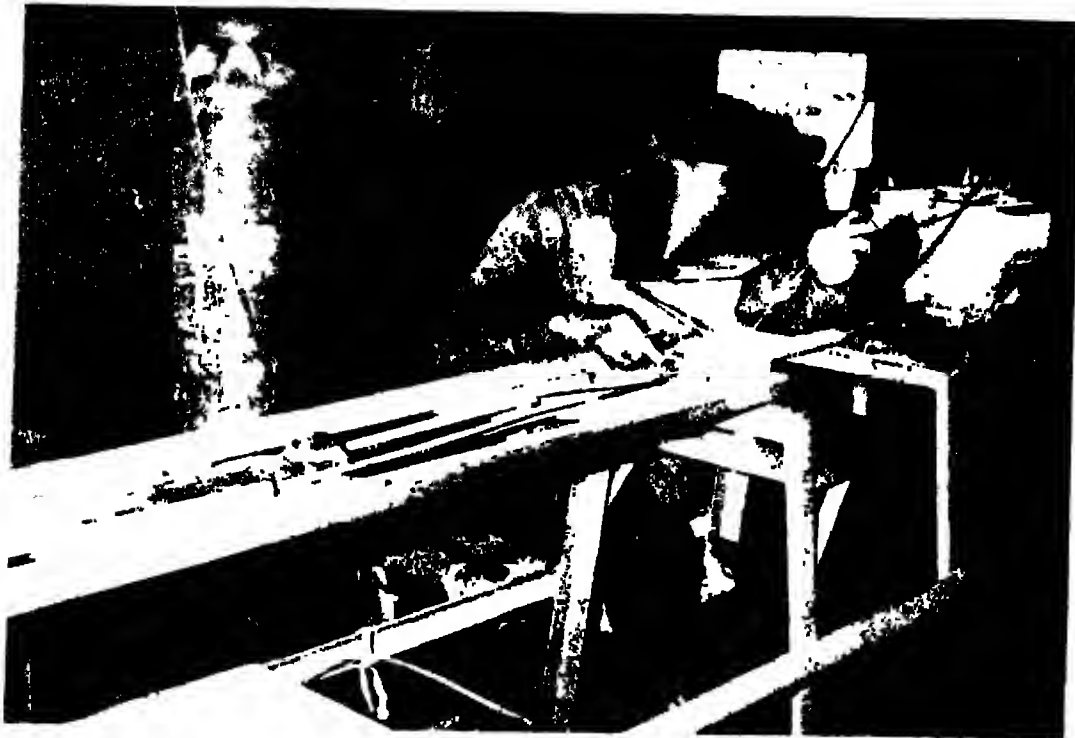
Oxygen plays a vital role in the making of steel. It is required to increase the heat of furnaces where the iron ore is being smelted. In the open hearth furnace, oxygen is blown into the furnace directly (called 'Lancing') to enrich the flame

and help to make the impurities burn faster. It is also used for cutting applications in the steelworks especially to remove surface faults from the ingot or slab before it goes to the rolling mill 'Scarfig' as this is called can be done manually or by a machine. Indian Oxygen Ltd. has featured in the story of Indian steel from the beginning. From bulk deliveries in liquid form to setting up of 'tonnage' plants alongside the steelwork for continuous piping of the gas to the point of use, IOL is working to help the steel industry.

Oxy-Acetylene

Any form of metal fabrication requires joining or cutting. This joining, at one time done by rivetting came to be replaced in most cases by welding. The oxy-acetylene flame brought about a revolution in technique. With the introduction of electric arc welding, the welding process became more developed and sophisticated. An 'arc' is struck when the electrode is brought near to the object to be welded and deposition of metal takes place. Electric welding processes can be manually controlled or they may be semi-automatic or fully automatic.

IOL produces a range of over 20 types of mild steel and special purpose electrodes. Besides IOL manufactures and provides the full range of welding equipment. IOL's cutting machines range from simple straight line cutters to large complex profile cutting



Argon-arc Welding in progress

machines, now in use in hundreds of workshops all over the country thus providing in a way the foundation of the growing metal fabrication industry in India.

Oxygen is also manufactured to a high degree of purity for

specialised requirements like flying in high altitudes.

LOX

IOL had developed and introduced Liquid Oxygen Explosives for use in open cast coal and iron ore mines.

Blasting by L.O.X



Argon

IOL is the leading manufacturer of 'argon', an inert gas making up nearly 1% of the air, and inert gas shielded welding equipment. Argonarc welding is required for the aircraft, railways, chemical and fertiliser industries.

Nitrogen

Nearly four fifths of the atmosphere is nitrogen. The wide ranging uses of nitrogen gas in the steel, food packaging, lamp, refrigeration and other industries make it the gas of the future. IOL technologists are busy researching into this wonderful 'gas of the future' for many interesting applications in India.

In the Medical Service

To the medical profession, IOL provides the most humane of its services. IOL maintains constant supply of medical oxygen, carbon dioxide, nitrous oxide and the best of equipment for anaesthesia, analgesia, resuscitation and oxygen therapy. IOL experts fabricated an emergency operation kit that proved a boon for soldiers injured in action.

Export

IOL products enjoy too an excellent reputation abroad. Besides exporting such products like the range of arc welding electrodes, argon and medical equipment, IOL renders valuable

technical assistance to importing countries in West and South East Asia, and Africa.



A Section of the Research Department

Research and Development

Constant research for development of products and techniques is an important factor in the company's day today activities to meet two objectives: (a) to bring to Indian conditions the latest international technology (b) to meet the country's needs by the use of indigenous raw materials and local expertise.

Along with the relentless search for knowledge, IOL keeps a constant watch on the quality at every stage of manufacture so much so that IOL symbol today is a 'hallmark' of quality.



Indian Oxygen Limited

Bata-India

Path-finder for the Indian footwear industry

Fortyone years ago when Bata-India appeared on the Indian scene pioneering high speed mass production of shoes, shoe-making was considered a humble occupation. Bata's emergence not only gave the occupation a new dignity; it also set forth a number of ancillary industries, providing employment for thousands, at the same time, setting the footwear fashion from the traditional to the fast changing contemporary styles.

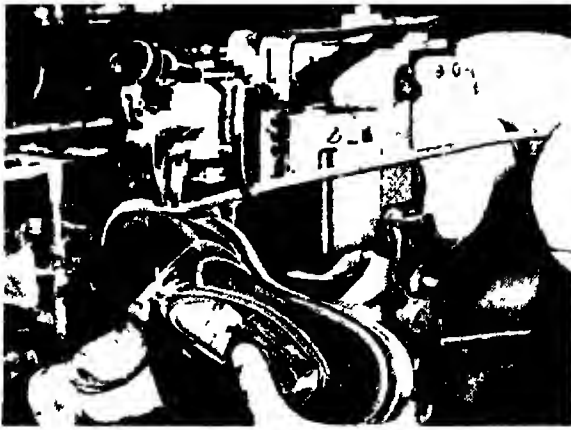
Today, at the 3 factories at Batanagar, Batagunj and Faridabad, Bata-India produces a wide range of leather shoes and chap-pals, canvas and rubber shoes for all the family, catering to all those who require value for their money. Apart from this, Indian hides are tanned at Mokameh-ghat and Batanagar to meet the high quality of leather required by the shoe factories.

Bata is a major supplier of footwear to the Indian armed forces and has successfully developed the first Miners' Safety Canvas Boots. Again, Bata Wayfinders are the only approved shoes for scouts and guides in the country.

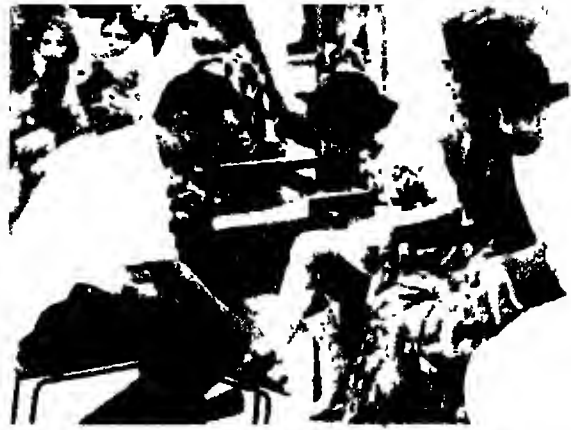
Besides providing a full-time vocation to over 22,000 people and giving them the best employment facilities and rewards, Bata-India today is playing a vital role towards the general growth of the economy of India by contributing in a big way to the National Exchequer through payment of taxes and duties.

Lunch time break at Batanagar





A shoe being made at Butanagar leather factory.



Children are Bata's valuable customers

What's more, almost another 300,000 people are supported in the ancillary industries.

The Company's retail and wholesale distribution network covers the entire spread of the country.

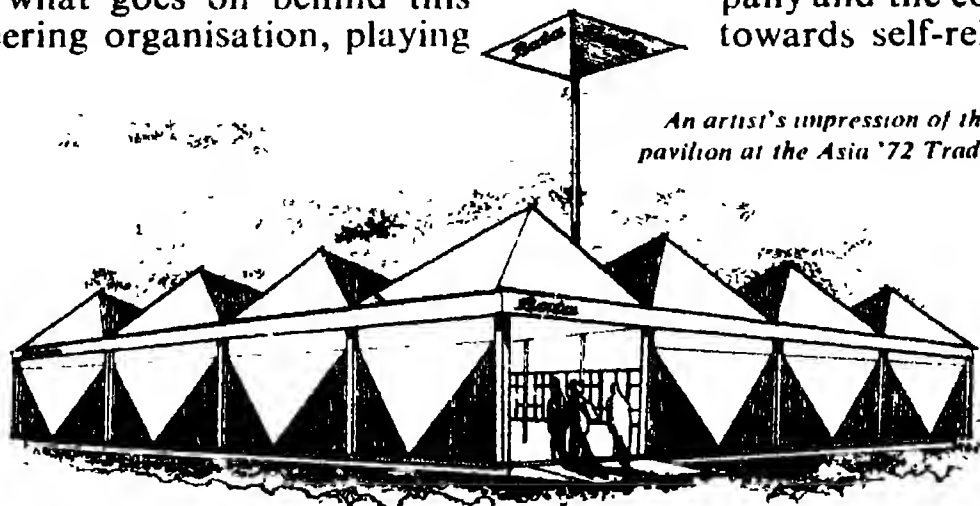
Apart from planned import substitution that has enabled the Company to substantially reduce the import bill, Bata-India has an enviable export record, having earned well over Rs. 200 million in the last five years from the U.K., Western European countries, the U.S.A., Canada, Australia, West Indies and other nations.

The Bata pavilion at the Asia '72 Fair shows, in a small way, what goes on behind this pioneering organisation, playing



A consignment of Bata-India footwear being shipped abroad

a significant role each day through constant research and development, import substitution, export drive, staff training—all designed to take the Company and the country towards self-reliance.



An artist's impression of the Bata pavilion at the Asia '72 Trade Fair

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Cold Common from Vitamin C

By WALTER ROSS

What the experts say about this common-cold cure

SINCE it was discovered nearly 40 years ago, vitamin C (chemical L-ascorbic acid) has been hailed as a cure for everything from tuberculosis to schizophrenia, including measles, tonsillitis and cobra-venom poisoning. In reality, doctors find, its performance doesn't live up to its publicity.

None the less, unbounded belief in the vitamin continues among non-professionals. Recently, Professor Linus Pauling, Nobel Prize-winning chemist, published a book saying that tremendous doses of vitamin C prevent and cure the common cold. He advocates taking 1,000 to 2,000 milligrams a day. And if a cold comes anyway, he says, the dose should be increased: 4,000 to 15,000 mg. per day.

The daily dietary allowance of vitamin C recommended by the British Department of Health is 30 mg. Does Pauling know something doctors and nutritionists do

not? Linus Pauling is an eminent chemist; he is not a doctor. He says he is untrained in nutrition. He has done no controlled experiments with vitamin C. Instead, he relies on published reports.

One study that Pauling cites frequently was made in 1939-40 at the University of Minnesota in the United States. There, 427 students were given prescriptions for "cold medication" to be made up at a university pharmacy. Of these, 233 received 100-mg. tablets of vitamin C. The others were given sugar pills flavoured with citric acid.

Dosage instructions were the same: take two a day during the 28-week "cold season." Only the pharmacist knew which students had which pills.

The vitamin-C group reported an average of 5.5 colds a season before the study. At the end of the 28 weeks, they had averaged only 1.9 colds, a sensational 65.5 per cent

reduction. But the sugar-pill group, which averaged 5.9 colds before the study, got only 2.2 colds per person—an almost equally startling reduction of 62.7 per cent.

Pauling considers the difference significant. The authors, however, concluded that their study did not show that substantial doses of vitamin C had “any important effect on the number or severity of infections of the upper respiratory tract.”

To find out if there had been any studies that might prove vitamin C an effective cold remedy, I consulted Dr. Charles Glen King, co-discoverer of the vitamin in 1932. “There is no evidence whatever that large doses of vitamin C serve any useful purpose, including curing the common cold,” he told me.

C-Trials. At Britain’s Common Cold Research Unit, one group of volunteers were given 3,000 mg. of vitamin C a day—well up to the Pauling levels—while a control group were given dummy tablets. Exactly the same number of people in each group developed colds. “The treatment was obviously no help at all in preventing colds,” says Dr. D. A. J. Tyrrell, the Unit’s director.

Moreover, Dr. King points out, while vitamin C is considered a safe substance, a dose of *anything* multiplied substantially over known health requirements may prove harmful. Too much vitamin C can cause severe diarrhoea, dangerous for small children and elderly

people. Large doses have been used experimentally to produce abortions.

Dr. Frederick Stare, chief of Harvard’s Department of Nutrition, agrees. Large doses of even such innocuous things as sugar, salt and plain water can be dangerous, he says. And vitamin C is far from mild; it is a strong acid, with decided effects on body metabolism.

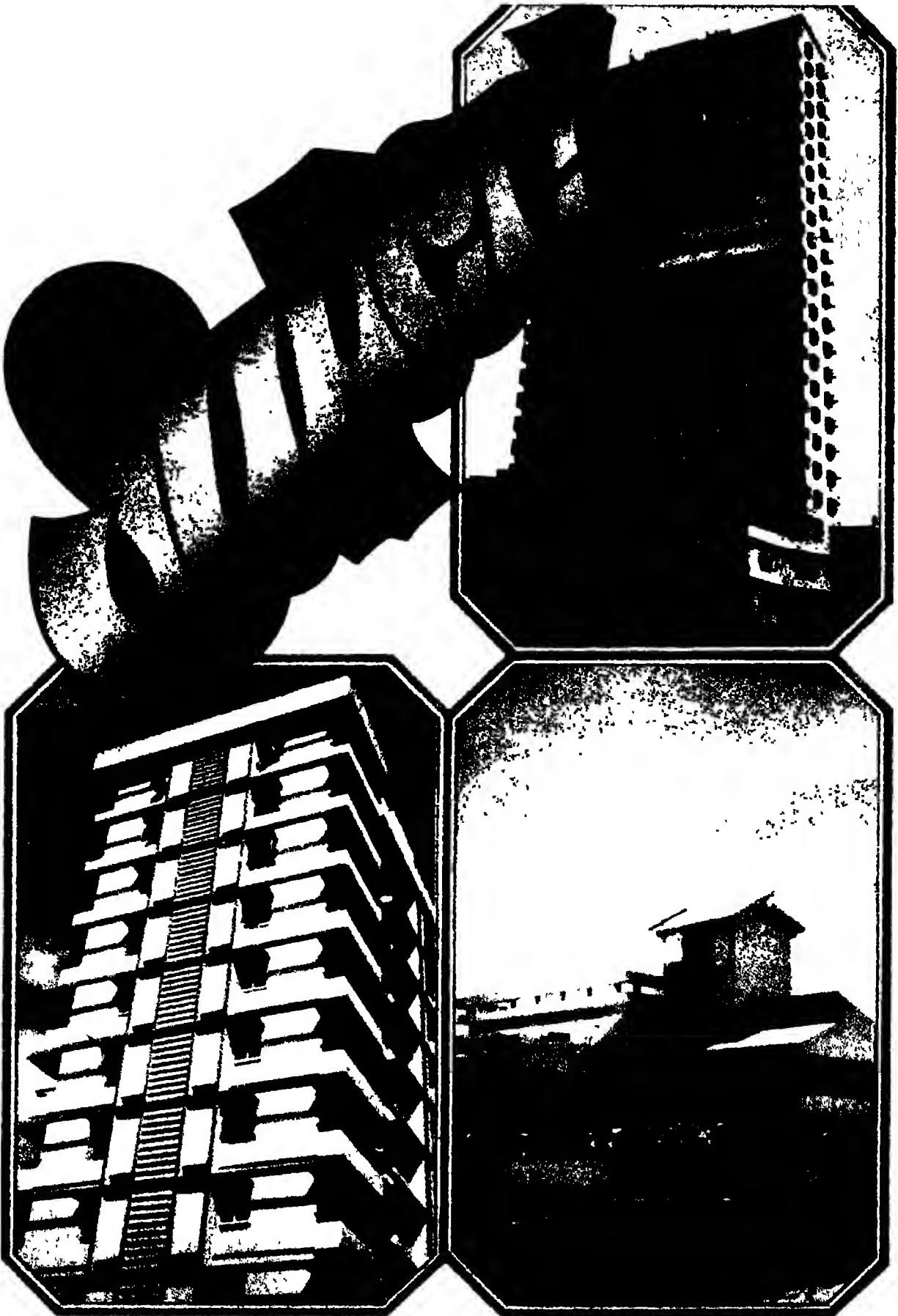
Balancing Act. Healthy people have a body pool of vitamin C of about 1,500 mg., one-tenth the daily amount Pauling recommends some people to take to fight a cold. The vitamin is stored in all tissue but concentrated in the liver, retina and various glands. And no matter how much more vitamin C is eaten or injected, it’s almost impossible to push the body pool over this 1,500 mg. The kidneys spill the excess directly into the urine, most of it within three hours.

Doctors utilize this fact to treat some patients with urinary-tract infections, by giving them from 4,000 to 10,000 mg. of vitamin C a day. But some of these patients have developed kidney stones. Doctors have been warned that very large doses of vitamin C should be avoided in patients with tendency to gout, formation of urate stones, or cystinuria.

However, most experts agree that healthy adults can absorb as much as 1,000 mg. a day without ill effects. So the question is: Would that much do us any good?

Vitamins are defined by the diseases that beset us when we don’t





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get enough of them. Vitamin C's disease is scurvy, which destroys gums and scar tissue, and attacks the bones. Once commonplace among soldiers and seafarers, scurvy began to fade as a menace late in the eighteenth century with the discovery that it could be prevented or cured by eating fresh fruits and vegetables. In 1932, after Dr. King isolated vitamin C from lemon juice, scientists found that 10 mg. of the vitamin a day would ward off the disease in an adult.

Still, vitamin C continues to have important therapeutic uses. Experiments over the past 30 years indicate that its ability to build scar tissue gives it an important role in healing wounds. Many surgeons give post-operative patients 100 to 300 mg. of vitamin C a day. There is also substantial evidence that it helps prevent anaemia, and that the body needs extra vitamin C when subjected to tuberculosis, rheumatic diseases, and such injuries as serious burns.

The Right Amount. Most doctors believe that the 10 mg. a day necessary to prevent scurvy is not enough for general health. But how much is enough to put us in the pink? Nobody knows for sure. But there are two other facts that scientists keep in mind when estimating our need for vitamin C. First, although it's possible to get as much as 350 mg. a day out of food in a balanced diet, we don't all eat the foods which give us the recommended

daily allowance.* Second, people vary considerably in their need for the nutrient: some are apparently quite healthy on only 10 mg. of vitamin C a day; others may need 200.

Every expert I spoke to has assessed the tangibles and variables, and has come up with his own personal solution.

"I'd say we need 100 to 200 mg. a day," says Harvard's Dr. Stare. He gets this much in his normal diet and takes no vitamin pills. Neither does Dr. Tyrrell, nor Professor John Yudkin, Britain's leading nutritionist, who is partly responsible for assessing the officially recommended daily allowance. J. J. Burns, research director of Hoffman-La Roche, which makes vitamins, frequently takes a 200-mg. tablet of vitamin C in addition to his daily glass of orange juice.

Dr. King, who began it all, has never taken vitamin-C pills, confident that he gets more than 100 to 200 mg. by drinking tomato juice, eating oranges or "green vegetables that are not overcooked and perhaps sprinkled with lemon juice and a little paprika." (Paprika is one of the richest sources of vitamin C.) "Like Professor Pauling," says Dr. King, "I haven't had a cold for several years."

* Vitamin C is present in all fresh vegetables, the greener the better; cabbage is a rich source. Half a cup of orange juice (120 cc.) will give you 50-60 mg. Summer fruits are loaded with vitamin C, even when made up into jam; autumn fruits don't have much. Potatoes, especially new ones, have a fair amount when eaten freshly cooked (keeping them warm reduces the vitamin content). Cooked meat contains little vitamin C, pasteurized milk only a moderate amount.

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Buttoned across with large
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Her gown .

Gypsy gown in printed Cotswol with
great big flounces on hem and bell-
sleeves Shawl in pale green Cotswol.



His waist-coat .

The long, lean shirt, bootlaced in front, is topped by a tweedy waist-coat with giant pockets Both in Cotswol.

Her evening gown
Straight out of Jane Austen
is this magnificent creation
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skirt and shoes with
wooden beads

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The plaid, plaid look in an
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A Portfolio of Birds

KEVIN MA DONNE



PICTURE FEATURE
By ERIC HOSKING

EIGHT-YEAR-OLD Eric Hosking snapped his first bird photograph, using a very cheap Box Brownie camera given to him by his parents. Today, at 63, he is one of the world's leading bird photographers. Pioneering new techniques and insisting whenever possible that his subjects be wild and free, he has captured most breeds of British birds on film, and has travelled more than 800,000 kilometres to record unusual bird behaviour in remote areas of the world. His collection of 200,000 bird photographs is unique. Here, in a six-page folio, he presents and describes ten favourite pictures he has taken of birds in Britain.

Owls fascinated me as a boy, particularly the handsome tawny owl (left). Each night, owls haunted the playing fields near my parents' London home. But I could not capture the owl's nocturnal secrets until 1936, shortly after the first flash bulb was developed. With it I was able to photograph a barn owl holding a young rat in her bill—the first time, as far as I know, that this had been done. The picture has since been reproduced all over the world.

To find its prey, the owl depends on night vision so acute that a solitary candle casts enough light for it to see a scurrying mouse more than 400 metres away. The prey hears nothing since the owl's silent, wraithlike flight—the origin, I'm sure, of many a churchyard ghost story—allows it to approach unheard.

The Bearded Tit (top right), one of Britain's rarest breeding birds, has the looks of a pantomime gallant, making it the Prince Charming of the reed beds. I photographed this one with its hungry youngster at the Minsmere, Suffolk, sanctuary of the Royal Society for the Protection of Birds. There the warden, H. E. Axell, recorded 214 different bird species last year, probably a record for anywhere in the British Isles.

Oystercatchers (right) at Hilbre Islands in the Dee Estuary, Cheshire, an ornithologist's paradise, which I have visited almost every autumn for more than 20 years to photograph migrants from northern climes. When the tide rises, 15,000 waders—dunlins, knots, sanderlings, redshanks, turnstones, curlews and oystercatchers—form a bird-jam on some 2,000 square metres of dry rock.



Bearded Tit

Oystercatchers



The Cuckoo (below) is one of the most difficult birds to photograph. With most breeds, you need only find their nests, and there they are caring for their eggs or young. But the cuckoo builds no nest of its own, and had eluded my efforts to photograph it for 30 years.

Then last year a cock cuckoo began to perch regularly on a dead tree at Minsmere. Building a hide less than six metres away I settled inside with a cuckoo recording borrowed from the BBC. For eight hours straight I played the recording—it nearly drove me cuckoo.

When at last the bird accepted the challenge to oust the "intruder" from his territory, he landed directly on top of the hide. I could hear him tramping just above my head as he searched for his rival; he even joined in for a duet with the recording. It was the nearest I had ever been to a cuckoo, but

there was nothing I could do about it—he was out of view of the camera.

Finally, baffled, he flew to his perch to survey the source of the mystery voice, and I seized the opportunity to photograph my most reluctant sitter.

The Green Woodpecker (right), like most birds, is a devoted parent. The cock sounds a laughing yaffle note letting the hen know that he has food for her and the youngsters secure in the depths of their nesting hole. As the young grow, both parents go foraging. Excitedly, the young vie with each other to climb to the mouth of the hole to be fed first.

The chick seen here went on calling until the mother had forced so much food down its throat that it had to give up and make room for the next member of the family. When the young woodpeckers had flown, a pair of starlings, spying a ready-made home, moved into the woodpeckers' hole.

The Avocet (lower right), is an instant walker. Two hours after this chick broke out of the egg, he started to wander from the nest on Havergate Island, Suffolk. The cock bird, which could hear the other three young calling inside their eggs, was torn between staying near to them or going after the wanderer. Finally, his excited calls brought the hen, and she guided the chick back to the nest. Only when all the eggs were hatched did the avocets walk off, as a family, in search of food.

The Reed Warbler (far right) is one of our later summer visitors. Having seen this little bird by the River Nile, I never fail to marvel that it may have flown more than 6,800 kilometres to raise its family at the edge of an East Anglian reed-bed.

The male comes first to establish his territory. Some few days later he is joined by his mate, who soon goes to work building the nest. For this she has to be a real gymnast. Clinging to a couple of reeds, she often performs the splits as the reeds part. With tiny bill and claws as her only tools, she fashions a deep cup mainly of dried grasses strung to four or more reeds. Secure against the buffeting of the strongest winds, the nest is an astonishing feat of engineering.

Cuckoo





Green Woodpecker

Avocet



Reed Warbler

The Kingfisher (below) is one of Britain's most colourful birds. I have photographed its equally exotic cousins in Pakistan, Bangla Desh and at Kenya's Lake Naivasha. But to get this colour picture—perhaps my most successful—I went only eight kilometres from my home in London to the Metropolitan Water Board's Walthamstow Reservoir, where I found a kingfisher pair nesting on an island.

It was fascinating to watch them dive for their catch, knock out the fish on a rock, as seen here, then fly with it to the nesting hole to feed their young. The speed of flight is so great that I used a photo-electric beam shutter release. As the bird came within half a metre of the rock, it broke the beam—and photographed itself.



Sand Martin

Kingfisher





The Sand Martin (left) long set ornithologists a riddle: how can this supremely graceful bird swoop at 30 k.p.h. straight at the wall of a sandpit, as though about to dash itself to death, yet somehow brake sufficiently to glide into its 7.5-centimetre-wide nesting hole?

Using a high-speed flash, I was able to discover the secret. A split-second before the sand martin reaches the entrance to its nest, it spreads its wings and drops its tail, hanging in mid-air. Next, its wings beat forward, and its spread tail curves upwards, so that it turns itself into a parachute that stops its forward flight.

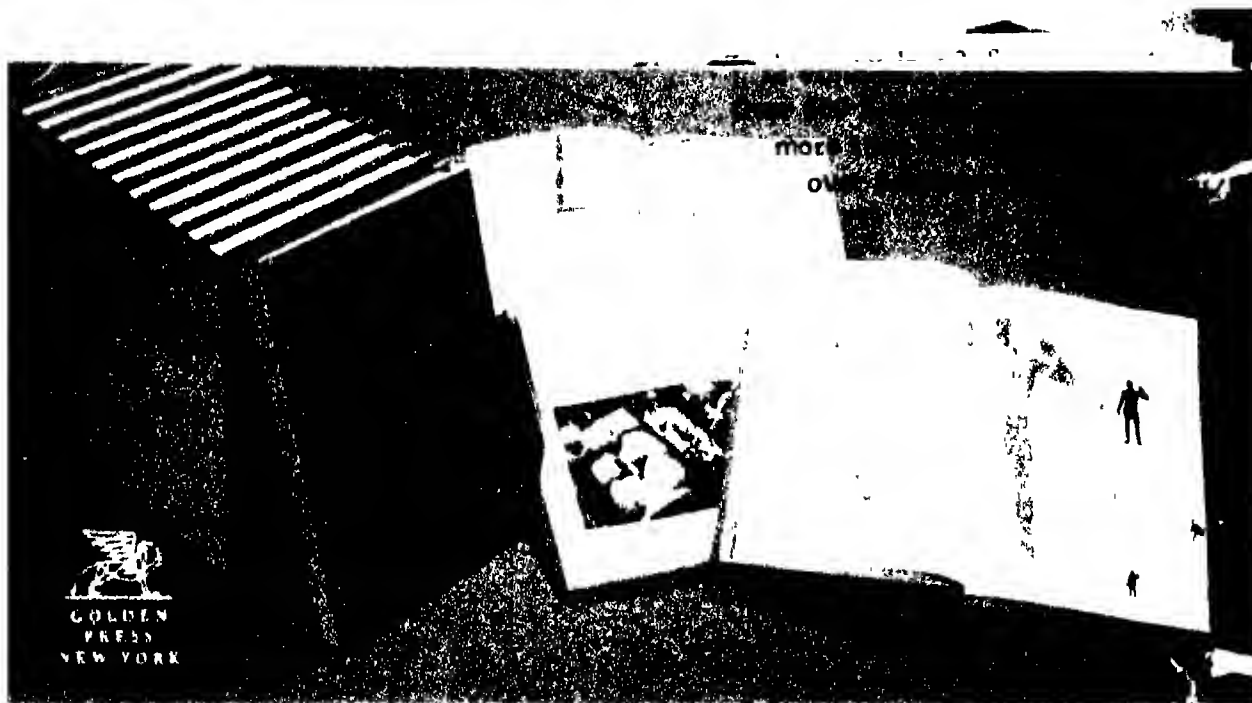
The Hobby (bottom left), a bird of prey of the falcon family, takes over the abandoned nest of some other bird set high in a tall tree. To overlook this one on the Surrey-Hampshire border, I had to have a hide 19.5 metres above the ground. Five tons of steel scaffolding went into the erection of a pylon that would support me and my equipment.

Then, just as I was hoping for my best pictures, a thunderstorm struck. With lightning flashing all round my steel perch—an excellent conductor—my hair was literally standing on end. But I dared not descend. Had I done so, the hobby would have taken fright and left her three youngsters exposed to the deluge. In minutes they would have been dead. And I would have broken my life-long rule: no photograph, however remarkable, however unusual, can ever justify harm to a single bird.

Hobby



Eric Hosking's autobiography, "An Eye for a Bird," written in collaboration with Frank W. Lane, is published by Hutchinson, London.



6 Reasons why your home should be equipped with this Encyclopedia.

1 Specially commissioned by Golden Press, New York, to serve as the complete family medical guide, the Encyclopedia was prepared under the editorship of Benjamin F. Miller, M.D. (winner of Francis and Taylor Prize, former Director of May Institute Medical Research, Member of Medical Advisory Board and author of numerous medical books for the layman, including *The Complete Medical Guide* and *You and Your Doctor*) together with 11 specialists, surgeons, psychiatrists and six special consultants.

The editorial board for the preparation of this Encyclopedia itself consisted of 20 editors and assistant editors so as to provide the most complete, yet medical information and health advice that a family will need, from the most common disorders (colds, indigestion) to the major diseases (cancer, heart disease). 11 artists were specially commissioned to prepare illustrations and charts to make the simple text simpler still to understand, and a team of 19 professional writers have transformed the complete medical information in simple language for the layman, so that any member of the family can refer any topic in the Encyclopedia and follow it easily.

2 The complete Encyclopedia consists of 12 compact handy volumes, easy to pick up and refer (unlike most encyclopedias which are too heavy to conveniently refer). 1,470 pages, over 650 two-colour illustrations, photographs, charts and drawings, more than 1,280 articles arranged alphabetically, and a 52 page index in volume 12 enables you to refer easily, quickly and

completely to any of the 8,900 entries throughout the Encyclopedia. More important, the technical terms have a cross-reference to the more common terms. For example, *Alzheimer's* see *HAZINESS*.

3 Apart from the exceptional value of its contents, the appearance of these volumes will give you a special satisfaction for it is beautifully printed and bound in washable life-time GOLDEN CRAFT binding in Moroccan Red and printed on thick coated paper which will withstand fire, wear, the weather and tear it is bound to receive from frequent referring.

4 6 COLOUR FOLDOUT SECTIONS add a special visual dimension to the text and illustrations in the Encyclopedia. By themselves, they give an overall view of the structure of the human body and show in detail how the body's systems work and what they do.

The editors believe that when you understand the magical world within your own body, the intricate and yet sturdy mechanisms of the heart, lungs, liver and kidneys, the brain and nervous system, the endocrine glands and their hormones, you will overcome many unfounded fears and gain new confidence in your ability to enjoy and protect your good health. The six sections are:

SYSTEMS AND CELLS THE SKIN
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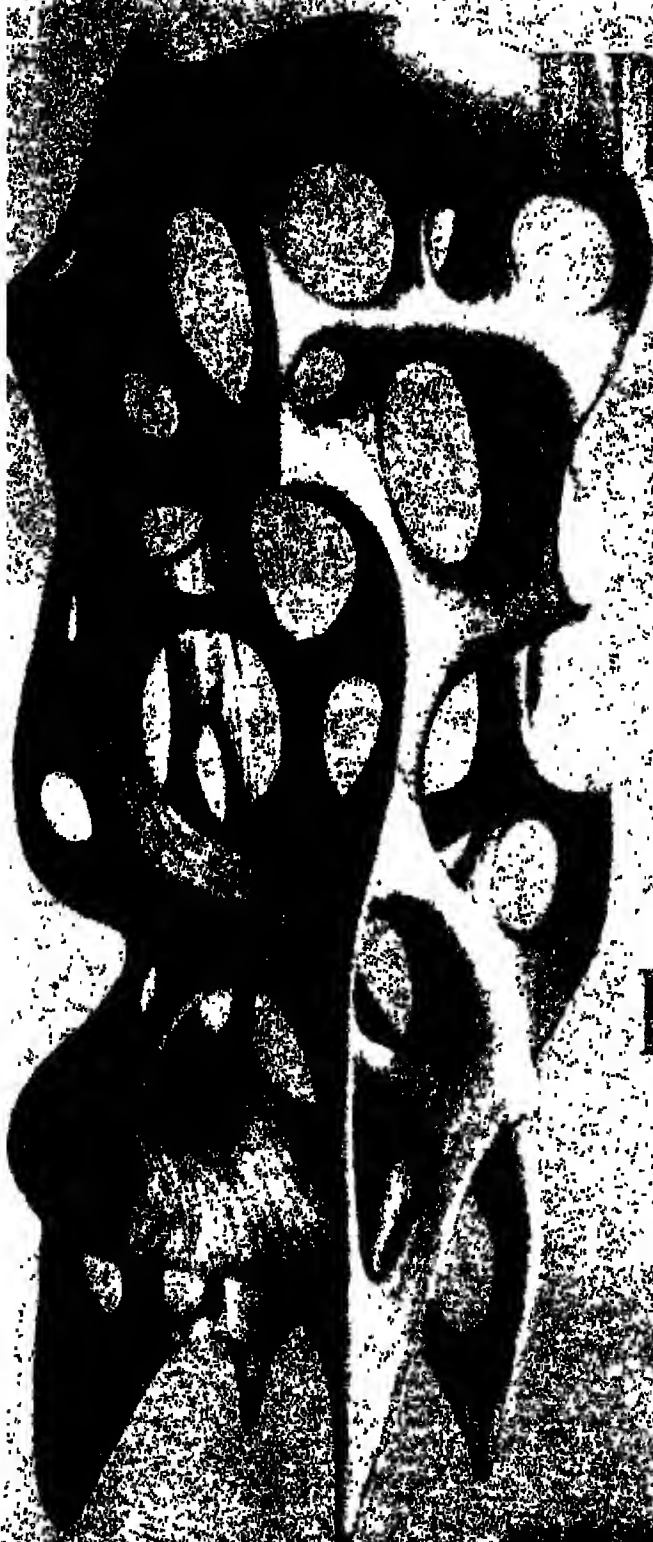
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Anatomy of Miss World

The facts behind the figures

By JOHN ENNIS

ON THE EVENING of December 1, some 26 million British viewers will be gripped by television's cliff-hanger of the year, the Miss World Final. They will watch transfixed as beautiful girls parade at the Royal Albert Hall in national costume and evening dress, then stand in bathing suits, with ankles touching, to prove they are not bow-legged. Home experts in comparative anatomy will denigrate each other's favourites by calling attention to a too-tilted nose, plumpness on the hip, a hint of weakness in the Achilles tendon. Not until the triumphant, damp-eyed winner is wearing her wobbly crown will the viewing millions relax.

Now in its twenty-second year, the Miss World Final has taken its place as a British sporting event to compare with the Derby or the Boat Race.

"As a winter fireside pastime," says one observer, "it has everything: suspense, joy and tears,

fashions for the women and guilt-free girl-watching for men."

Despite annual, anguished cries of "It's a fix!" from disappointed sponsors, and in 1970 a Women's Lib. demonstration in which smoke canisters, flour bags and ink bombs were hurled from the Albert Hall's top tiers, the Miss World contest attracts more and more beauties every year. A record of some 74 hopefuls are expected to join Miss United Kingdom on the Albert Hall catwalk for the 1972 Final—and all in an atmosphere of near-Puritanical respectability. "Leering acquaintances bruise my ribs," says Michael Aspel, for ten years the Miss World Final commentator and interviewer, "but their nudges and winks are completely unjustified. It's really a very decorous affair."

Overseas governments willingly let themselves become involved, for they see national prestige at stake in the Albert Hall line-up. When Miss Jamaica won in 1963, her jubilant

government printed her portrait on a stamp. Last year, a "Miss Thailand" was found to have got into the contest by a corner-cutting route. The Thai Embassy solemnly disowned her, announcing, "To be called Miss Thailand one has to pass a well-organized contest judged by competent and prominent personalities." The girl caught a diplomatic "cold" and withdrew.

Firmly controlled by chaperones, and awed by the thought that they represent their country's ideal of femininity, the contestants are swept in fleets of white Rolls-Royces from Heathrow Airport to their quarters in the Britannia Hotel, Grosvenor Square. There, a form of mid-winter madness erupts about their delectable persons. Security men seal off the floor the girls occupy. Other guests crowd the lobby as contestants come and go. Worldly-wise hotel staff break into smiles and cheerfully work overtime to minister to beauty's non-fattening wants. Says Charles Prew, assistant manager at the Britannia during the last contest, "For two weeks the hotel pulsates with life and excitement."

Reporters and photographers from the world's press camp at the Britannia. Most of them are frankly seeking scandal, and in its absence have to settle for trivia on the girls' ambitions to travel or to marry the boy they have left disconsolately waiting back home. A German magazine has promised Rs. one lakh to anyone who proves that contest



director Eric Morley, of Mecca Ltd., is compromised with a contestant. Morley, happily married father of five, hits back with a topping offer of Rs. two lakhs for the same proof.

Bold, ingenious attempts are made to date the girls. Would-be suitors have turned up at the hotel posing as cameramen, family friends, hairdressers, bearers of urgent messages, and Army officers on initiative tests with orders to produce a contestant for cocktails in the mess. Like waves against Beachy Head, they bounce impotently off the barrier of security men.

Closest thing to a break-through



was made by a rugby team who found to their joy that they were booked into the Britannia during the Miss World season. Returning bright-eyed from a banquet, some of the girls cast interested glances at their muscular fellow-guests, who immediately jumped to the wrong conclusion.

A slapstick battle up and down stairs, in and out of lifts and along forbidden corridors lasted until 3 a.m. One man almost got inside a girl's room, to have his rugged face made more so by a blow from a swinging door. Only when threatened with a combination of police

action and a punch in the eye from Morley's opposing team of dance-hall bouncers did the footballers cry quits. Morley's wife Julia, a cool beauty who is director of Mecca Promotions, the contest-organizing subsidiary, commented serenely, "We weren't really annoyed. Our side did quite well in the scrums."

Only once, in fact, did outsiders get closer to a Miss World contestant than the organizers would have wished. Some years ago the reigning Miss France, having developed a painful boil in a place which made her unable to sit, was taken to a room in the casualty department of

a London teaching hospital and placed face down on a couch. Then for a whole half-hour Miss France's baffled chaperone sat outside while 20 white-coated students, summoned urgently by the casualty doctor from all parts of the building, hurried in for unique instruction in the treatment for boils.

The chaperones—one for every six girls—are far from being the forbidding females the word conjures up. Usually air stewardesses, teachers or tour couriers, they are chosen from hundreds of applicants for their commonsense, knowledge of languages and attractive appearance. Their good looks, in particular, give them common ground with contestants, who must spend almost every waking hour of ten days in their company.

Until the night of the final, the girls are occupied by a round of rehearsals, entertainment and sight-seeing. They attend a lunch given by the Variety Club of Great Britain, whose charities for underprivileged children benefit by Rs. two lakhs from the sale of seats and television fees.

They visit Madame Tussauds, crocodile through the Tower of London, are entertained by MPs at the House of Commons and may debate with members of the Cambridge University Union, defeating such motions as "Beauty is only skin-deep." On these jaunts the girls travel together by coach, and Morley, after accompanying them,



propounds an immutable law of inertia found in no physics text book: "No power on earth can move a body of beauty queens across 15 metres of pavement from hotel door to coach in one second under 15 minutes."

Like the Royal Festival Hall and Battersea Funfair, the Miss World contest was originally part of the 1951 Festival of Britain. "Miss World was my brainchild," says Morley, who, after 12 years' Army service from band boy to acting major, was then fighting to build a career with Mecca as publicity sales director.

Barely Covered. In his first contest only five of the 20 entrants came from abroad. The girls wore bikinis—a mode of undress quickly changed to the one-piece bathing suits which are the rule today. Morley found that too few countries would send girls to a two-piece contest; also, the definition an ambitious female gives to the word "bikini" can be alarming. He never forgets a preliminary contest in which a girl almost caused his hall to be wrecked by striding on stage in just a G-string and two stars.

Though Morley is today chairman and managing director of Mecca—an entertainments giant with annual profits in the region of Rs. 20 crores—he still conducts the Miss World rehearsals. Teaching the girls to walk, pirouette, and pause to a silent count of three, he falls back on sergeant-major tech-

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niques: shouting orders, picking a cheerful girl and making a butt of her to get the others laughing and relaxed. After the dress rehearsal, the contestants are given a light supper of chicken and salad and packed off to bed at 10 p.m., each clutching a gift—a silver globe in a velvet case, or perhaps a gold, world-shaped locket.

The final at the Albert Hall takes three and a half hours. It is edited by the BBC to a one-hour programme which becomes "live" for the judging of the last 15 girls. The last seven say a few words to Michael Aspel, who has 60 interviews prepared in ten languages. Undertaking this task has given Aspel a national reputation as a linguist, but he says, "Actually, I have schoolboy French and National Service German. I play it for laughs, tongue-in-cheek."

Apart from being asked to take audience applause into account, the nine judges—prominent personalities in show business and other walks of life—are given no instructions. They use a voting system under which the girl with the highest average marks from all nine judges is the winner. Though guaranteed fair by professional scrutineers, in 1970 it led to a row that made Morley seriously consider an American offer to buy the Miss World show.

That year Grenada, one of the Windward Isles in the West Indies, sent an entrant for the first time. Grenada's Prime Minister, Eric

Gairy, who was visiting Britain, let it be known that he would agree to be one of the judges. Recalls Morley, "We'd had dukes, maharajahs, film stars—never a prime minister. I said 'Yes.'"

Miss Grenada—tall, stately Jennifer Hosten—won, as many people thought she would. Miss Sweden, Maj Christel Johansson, came second. But later reporters discovered that only two judges had given first position to Grenada, while four had placed Sweden at the top.

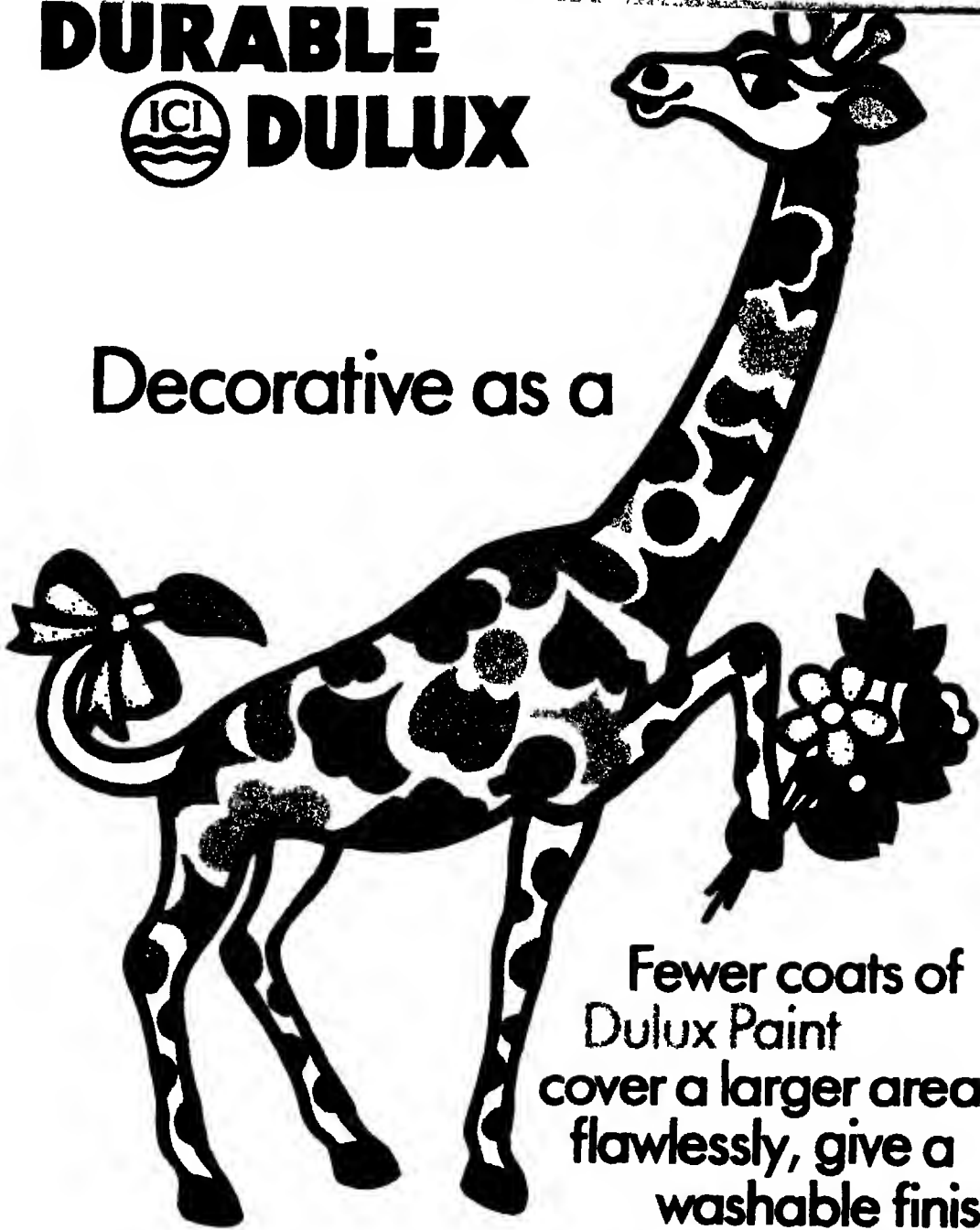
"Mecca was accused of fixing the result because we wanted to build a hotel on Grenada—a project that has never crossed our minds," says Morley. He published the judges' marks, which showed that Grenada's two firsts were helped by four seconds, while Sweden's average had been pulled down by five lower placings. The row ended in apologies—and a return to work by Julia Morley, who had offered to resign.

Star Attraction. The announcement of the winner comes with a rush. She receives a cheque for Rs. 57,000; the losers have to console themselves with the memory of their free trip to Britain, a year's dominance of their own national beauty scene and, if they are among the six runners-up, cheques ranging from Rs. 1,900 to Rs. 19,000.

Next morning, while the new Miss World is being photographed celebrating her win with champagne, commercial firms start bidding for her promotional services.

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In all, a Miss World can earn as much as Rs. eight lakhs for a year of commercial promotions—mostly in the fashion and cosmetics fields—in Britain and abroad. Within 24 hours of becoming last year's Miss World, Lucia Petterle of Brazil received Rs. 14,250, a Rs. 3,800 clothing voucher and a Rs. one lakh gold necklace for switching on the Christmas lights in a London store. But, back in Brazil, she dropped out of her Miss World duties to return to college. "Silly girl," said Julia Morley. "She's thrown away a chance every other girl dreams of."

Most Miss Worlds have completed their year of office and gone on to a bright future. Some have concentrated on careers. Ten became highly-paid models, two actresses, one a television announcer. Many have married men they might not otherwise have met—Catharina Lodders, Dutch holder of the 1962 title, married Chubby

Checker, the American dancer and singer who introduced the "twist"—while others, like Reita Faria, an Indian medical student, have combined a career with matrimony.

Reita was the most unlikely of all Miss World contestants. She came to the 1966 Final with a Rs. 385 off-the-peg evening dress and a bathing suit more than once used for bathing. In London she shopped for text-books and behaved at rehearsals as an amused spectator. She complained about the thickness of cosmetics applied to her face by make-up specialists, easily mimed the beauty queen walk taught by Morley—and took the crown.

At the end of her year's reign she level-headedly cast off the glamour, resumed her studies and qualified as a doctor, then married a fellow physician in Dublin.

As Michael Aspel says, "The Miss World Final is, after all, just a big, harmless, glittering frolic."

Flatter Chatter

I AM unusually tall for a woman, measuring 1.8 metres in my stretch tights. At a party in Belgium, a U.S. vice-consul who speaks Spanish fluently reported a conversation he'd had with a consul from a South American country who wished to be introduced to me. "In Spanish," the American told me, "a tall woman is referred to as a cathedral, and I spoke of you in those terms. "No, no," cried the South American. "This lady is no cathedral—she is the Vatican."

—Gwendoline Kingsmill

SPANISH men glorify women—all women—and enjoy their society. Each thinks of himself as the reincarnation of Don Juan. Every woman passing by, regardless of class or age, merits a stare and a careful assessment of her retreating figure from the ankles up.

Of the great variety of the Sevillian man's *piropos*—the compliments he would bestow upon a passing female—I recall particularly: "So many curves and me without brakes!"

—Barnaby Conrad, *Fun While It Lasted*



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Catholic Shepherd of a Communist Flock

By his unwavering strength in the face of persecution, Cardinal Wyszyński has given the Polish people courage to uphold their faith

By ALEXANDER JORDAN

THE CORPUS CHRISTI procession sets out at eleven, after High Mass at the cathedral. Scores of thousands of people line the streets along its route; the waiting crowd is quiet and orderly, but excitement is clearly mounting.

First to appear are a hundred small children, dressed in white and strewing flowers from baskets. Next acolytes file by, swinging censers from which clouds of incense rise. At last, under a gold-brocade canopy, comes the white-haired

Cardinal Archbishop in vestments embroidered with emblems of the faith, carrying a huge monstrance containing the Blessed Sacrament.

As he approaches, people fall to their knees. A slow, whispered chant rises from the vast throng: "The Lord be praised in the Blessed Sacrament!"

Remarkably, the setting for this display of a church triumphant among a devout people is not Spain or Italy. It is communist run Warsaw in June 1971—and under the canopy is Stefan Cardinal Wyszyński (pronounced Vish in' skee), Archbishop-Metropolite of Gneizno and Warsaw, Primate of Poland.

Open Resistance. Even more surprising, along the route the Cardinal stops to deliver a speech in which he chides the government of his country. "My children," he says—using a form of address some think antiquated, but which he defends on the ground that he really feels a father to his flock—"as a nation under God, united by bonds of faith, we want to work peacefully for the satisfaction of our needs. They are numerous and they will be filled sooner, more efficiently and more willingly when we all feel we are full citizens whose elementary rights are understood and respected, including the rights of the Catholics in Poland.

"If the Church was ill-treated in the past, the first step towards a wholesome normalization should be the reparation of past wrongs and

the end of injustices to believers!"

The Church used to be ill-treated indeed. When the communists took over in Poland after the Second World War, their avowed aim was the extirpation of religious belief. As in all Eastern Europe, an era of persecution started. Under a system where the Government controls all economic activity and—for the average man, perhaps the most important of all—the allocation of housing, the communists' opportunities were endless.

There were cases of physical violence against priests, and the Cardinals Mindszenty in Hungary, Stepinac in Yugoslavia, Beran in Czechoslovakia were imprisoned, as was Stefan Wyszyński. Nowhere did the Church make a recovery comparable to that in Poland, where it is stronger today than it was even before the war.

Holy Orders. It is the personality, and the deep sense of vocation, of Cardinal Wyszyński that made the difference. Born on August 3, 1901, in the village of Zuzela in central Poland, Stefan Wyszyński is the son of a church organist. At the age of five Stefan told his mother: "I dreamt that I was married and had a family. But this can't be. I have to be a *priest!*"

Yet at first his priestly calling was almost thwarted by ill health. Attending a seminary during the First World War, he contracted tuberculosis and could not be ordained with the rest of his class. But he finally

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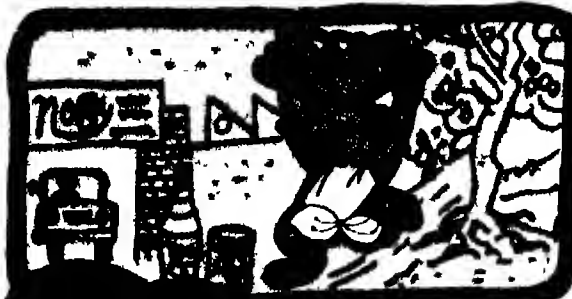
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took orders on his twenty-third birthday, and celebrated his first mass at the monastery-shrine of Jasna Gora near Czestochowa, the repository of Poland's cherished Black Madonna. Father Wyszyński soon became one of Poland's most promising Catholic scholars; to date he has published some 250 books, papers and articles.

During the Warsaw Rising of 1944, Wyszyński proudly served as a chaplain in the Polish Resistance outside Warsaw. In 1946 he was consecrated Bishop of Lublin and three years later was promoted Archbishop of Gniezno (the oldest diocese of Poland, established in 966 A.D.) and Warsaw. By the time he became a Cardinal in 1953, however, tension between the Church and the Government was growing, and the regime would not permit him to attend the usual investiture ceremony in Rome.

Soon afterwards police called at his residence in Warsaw to arrest him. Wyszyński's white sheep-dog, Baca, came to his master's defence and bit one of the policemen. The Cardinal immediately sent for a nun to wash and dress the man's wound before being taken away, with only a breviary and a rosary as luggage.

Ferried from one end of Poland to the other to prevent communication with the outside world, he was confined under heavy guard in four different prisons. But he was not forgotten by his flock. At the celebration of the Pledge of the Polish

Nation—a re-dedication of Poland to the Catholic faith—hundreds of thousands of pilgrims converged at the shrine of the Black Madonna of Czestochowa. Many *walked* hundreds of miles to get there. And near the shrine stood the Primate's throne, with only a few red roses to represent to the throng its imprisoned leader.

Welcome Back. In October 1956, a few months after widespread anti-regime riots, two members of the hard-pressed Government were sent to the Cardinal. They asked him to return to Warsaw and he agreed. The Government tried to keep secret the scheduled time of his arrival in the capital, but word spread quickly in Warsaw and a delirious crowd of thousands greeted him at the station. In the eyes of the people of Warsaw, Wyszyński's return symbolized a victory for Poland's hope of freedom.

Ever since, Cardinal Wyszyński has been working tirelessly to keep the Church alive and well. In 1957, the year following his release, he delivered 576 sermons and addresses. Day-to-day he works at the offices of the Archdiocese of Warsaw, housed in an eighteenth century palace, where all is calm and peace, with only an occasional figure in black gliding silently past. The Cardinal himself blends well with this setting. He is of middle height, slim and erect, with steely-blue eyes in a pale face. Serenity is his dominant feature: a calm detachment from all

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the little stratagems, all the superficial vanities of human relations.

Although the people see in their quietly tough cardinal a national leader, a man identified with his nation as De Gaulle was with France, or Mahatma Gandhi with India, Wyszyński emphatically disclaims any role in secular politics. Underlying this stand is a firm belief that while all governments are transitory, the Church is eternal. In June last year he said: "We shall not compromise with truth and full rights for the Church to win short-term advantages . . . The Church has plenty of time—until the end of the world."

Sowing the Word. As Poland's leaders have found out, it is not easy to win a political contest with a man who thinks in terms of eternity. Wyszyński himself alludes to this strength in a favourite anecdote. When Poland was being invaded by the Nazis, he encountered a unit of the Polish army on a country road. A soldier asked him to hear his confession and they crouched together in a ditch, because German aircraft were machine-gunning the road.

During the confession, Wyszyński's eye was drawn to a farmer calmly working in a field, only a few hundred yards from the chaos on the road. Afterwards, he walked over to him and asked: "How can you keep on working, when war rages all around you and everyone is fleeing? You must be the only calm person here!" The farmer replied:



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“I plough and I sow. If I don't reap the harvest, another will. My granary may burn, but grain in the soil will be safe and will grow.”

Speaking recently to young clerics, Wyszyński told them the story and said: “Bombs were falling, guns were firing, but he went on working . . . Be like him, sow the word of God in human souls, as Christ and his apostles did!”

The Cardinal himself has kept on “sowing” even while the bombshells of a hostile ideology were falling perilously close. In a public appearance during the Church-State crisis, the Cardinal said that he was speaking “to believers and unbelievers alike, and to those here in the line of duty”—a veiled allusion to the presence of secret police agents, there in the hope of catching the Primate out in some “subversive” statement. After the service, as he walked down the aisle, blessing the congregation and greeting friends, two men in belted raincoats—clearly there “in the line of duty”—approached. They bent down to kiss his hand and one of them murmured: “Forgive us, Father!” “I bless you, my children,” replied the Cardinal.

It is such calm, unwavering faith that has seen Wyszyński through the years of persecution. Nowadays, the regime treats the Cardinal with prudent deference, even while it continues to harass practising Catholics. The pressure ranges from official courses teaching atheism, to

efforts by party functionaries to publicize instances of priestly misconduct in order to discredit the Church. There is also harsh taxation, often beyond the individual church's ability to pay. But the Cardinal proclaims proudly that the Church in Poland, though poorer in worldly goods, is richer in faith than those in some other countries. Indeed, most Polish churches are packed every Sunday and Wyszyński wants to build hundreds of new ones, 40 in Warsaw alone.

Unbreakable Ties. Even many of the Party *élite* retain quiet bonds to the Church. Communism or no, a religious ceremony is still what makes a marriage valid in the eyes of most Poles. Government officials, for instance, will often first have a public civil wedding, then stealthily arrange for a repeat at some out-of-the-way church.

The result? In the 25 dioceses of Poland there are now 70 bishops, almost twice the number before the war; in the 6,000 parishes there are some 17,000 priests, compared to 13,000 before the war. There are more than 150 monasteries and convents with a total membership of about 30,000. There are also 25 seminaries, although their students are not exempted from military service. In the army, they are placed in special units where every effort is

made to wean them away from their vocation—but only very few defect.

Such pressure as is still exerted by the regime may be eased by Edward Gierek, who took over the leadership of the Polish Communist Party in December 1970. He has stated that "both believers and unbelievers should build Poland together," and was responsible for a law restoring to the Church certain ecclesiastical properties which it had previously owned.

Under Wyszyński and Gierek, Poland continues as a nation both catholic and communist. After more than a quarter of a century of, at best, uneasy co-existence, Church and State are now perhaps on the way to a more stable relationship. There is even some talk about a visit to Poland by the Pope.

This is Stefan Cardinal Wyszyński's achievement. But while co-existing, he has also shown the falsity of the "better-red-than-dead" tag, for he and his flock are neither, even though communists rule their country. Wyszyński and his faithful have managed to persevere with weaponry not measurable in megatons: faith and determination.

It is a thought that might well be pondered today, not only by Catholics, and not only behind the Iron Curtain, but also by many political and intellectual leaders in the West.

LETTER sent to an airline company: "Sir, may I suggest that your pilots do not turn on that little light that says FASTEN YOUR SEAT BELT, because every time they do, the flight gets bumpy."

—Donna Winter



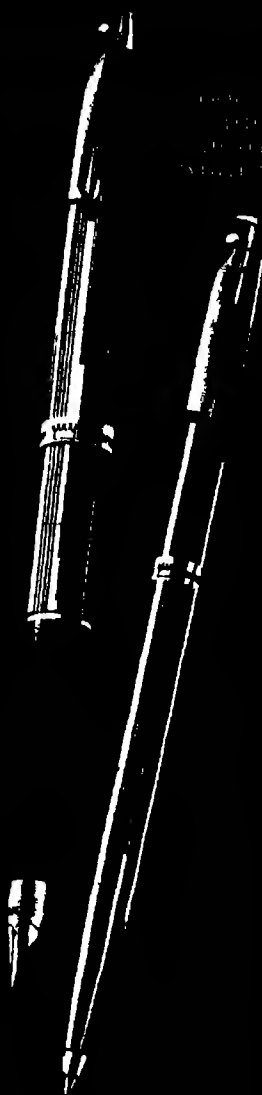
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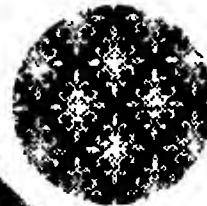
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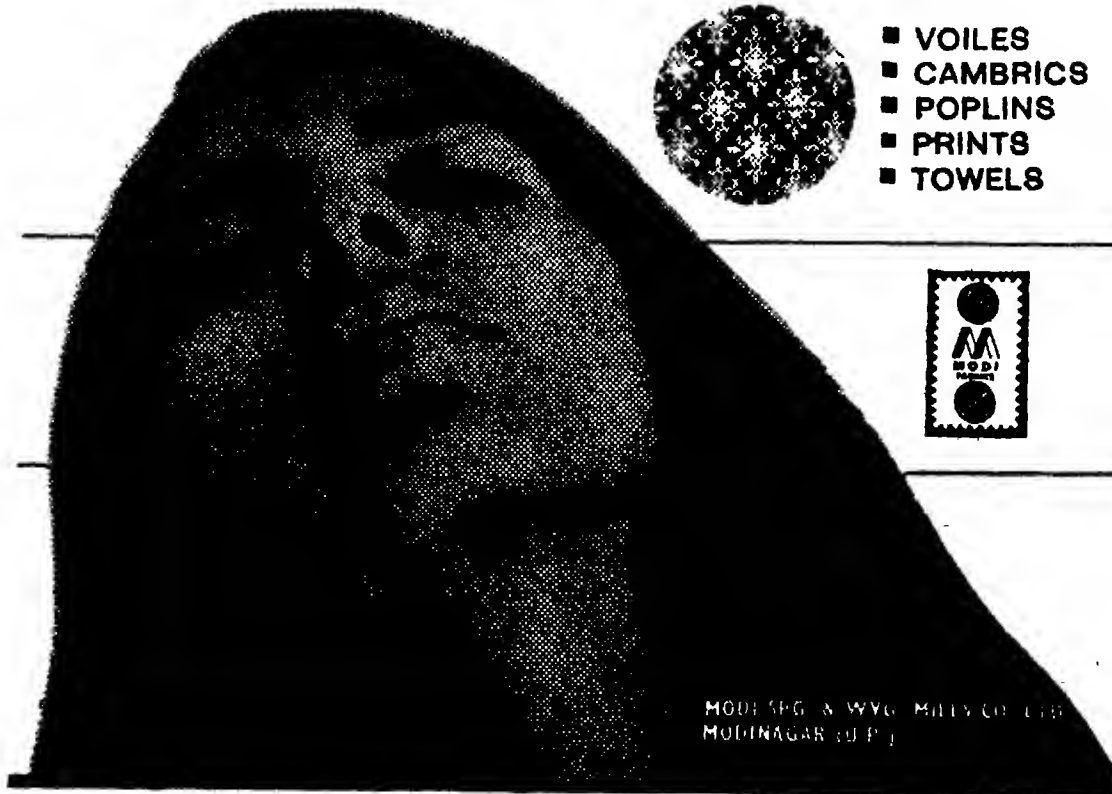
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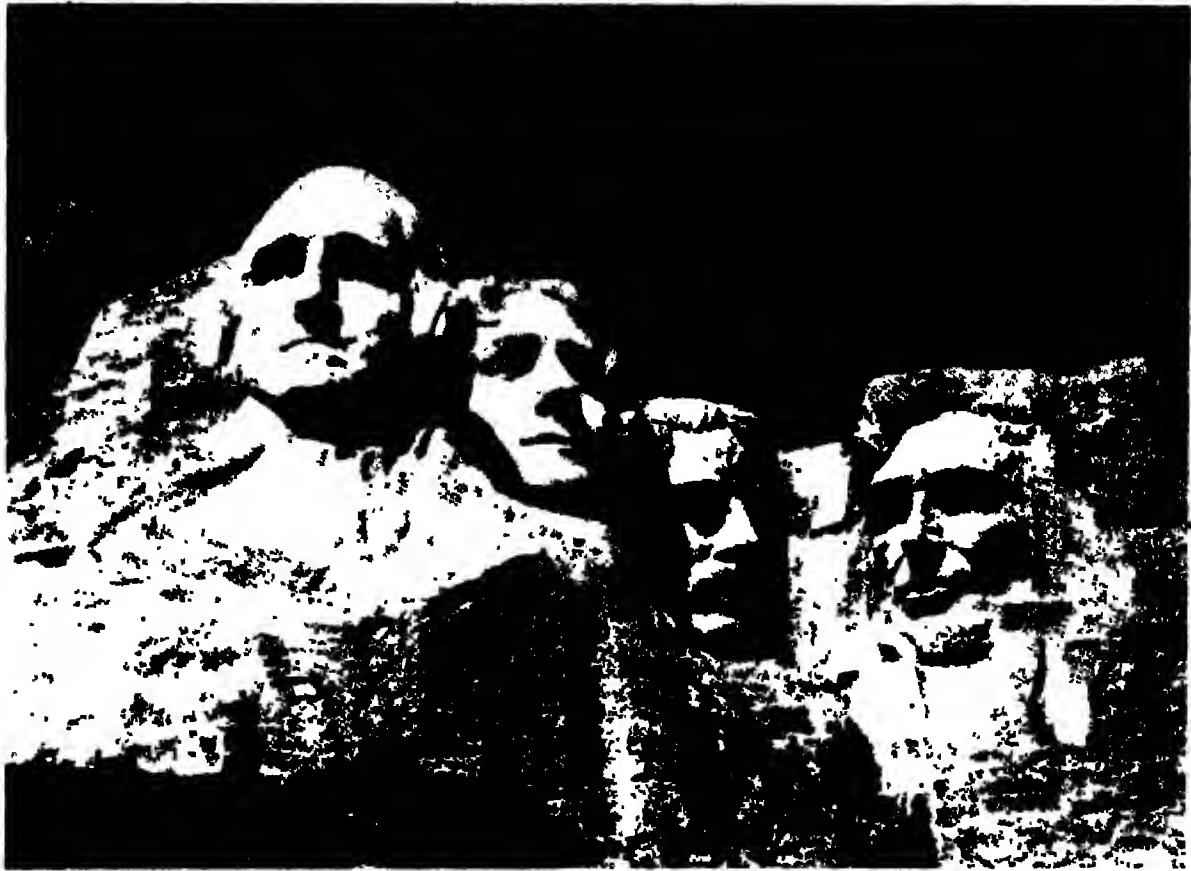
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Mountain of the Presidents

BY PAUL FRIGGENS

They march along the skyline of the Black Hills of Dakota—the giants of American democracy

BOB CLAMPIN



Left to right: George Washington, Thomas Jefferson, Theodore Roosevelt, Abraham Lincoln

CARVED ON the face of Mount Rushmore is the world's most colossal sculpture: the likenesses of four great Americans—George Washington, Thomas Jefferson, Theodore Roosevelt and Abraham Lincoln. And every year, more and more people—an expected 2.5 million in 1972—travel to

South Dakota's Black Hills to see it.

The creation of Mount Rushmore National Memorial was as dramatic as it was monumental. Swinging in leather harnesses across the face of an 1,800-metre mountain, miners blasted and drilled for 14 years, removing 450,000 tons of rock. It all began in 1923 when Doane Robinson, an

imaginative South Dakota state historian, suggested carving, in the Black Hills, the romantic figures of notable Sioux Indians, or Western trail-blazers such as Meriwether Lewis and William Clark. He invited famed sculptor Gutzon Borglum to come out and study the idea. But on seeing the beautiful Black Hills rise from the Great Plains, Borglum was inspired to enshrine the Presidents who personified "America at its best." "American history shall march along that skyline!" he said.

Borglum made rough models of the sculptures in his studio, then made an engineering projection of them at 12 times their size on the mountain itself—*figures five stories high*, scaled to men 152 metres tall! Washington's head is 18 metres high, his nose six metres long, eyes three metres across, his mouth five metres wide.

Using a plumb-line suspended from a horizontal bar, he transferred the dimensions to the mountain through a nine-metre movable boom, locating key reference points, such as a nose or chin.

Actual sculpting—with rock drills and dynamite—began on October 4, 1927. Colourful, flamboyant and absolutely fearless, Borglum climbed the mountain, a flyspeck against the great rock, and, dangling 76 metres over the cliff in mid-air, personally directed the daring operation.

It was hard, hazardous work, and the project was continually plagued by financial difficulties, but the first roughed-out head—that of George Washington—was dedicated with fireworks and oratory on July 4, 1930; the second, Jefferson, six years later, and Lincoln the following year. Borglum, now 70, could at last foresee the realization of his bold dream. In July 1939, the figure of Theodore Roosevelt was dedicated. (Visitors often inquire about adding other Presidents. Unfortunately, there is no suitable granite left).

I have often thought about those great stone faces. And words the men used in their lifetimes come rushing to mind, words that have special meaning for our times.

Washington: "Let us raise a standard to which the wise and honest can repair." Jefferson: "I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of man." Lincoln: "Let us have faith that right makes might and in that faith let us to the end dare to do our duty as we understand it." Roosevelt: "The first requisite of a good citizen in this Republic of ours is that he shall be willing to pull his own weight."

Sadly, on March 6, 1941, Gutzon Borglum died of a heart attack, shortly before the work was completed. But the memorial he left—this awesome shrine of democracy—is priceless.

THE WORST BOSS ANYONE CAN HAVE IS A BAD HABIT. —M. C.

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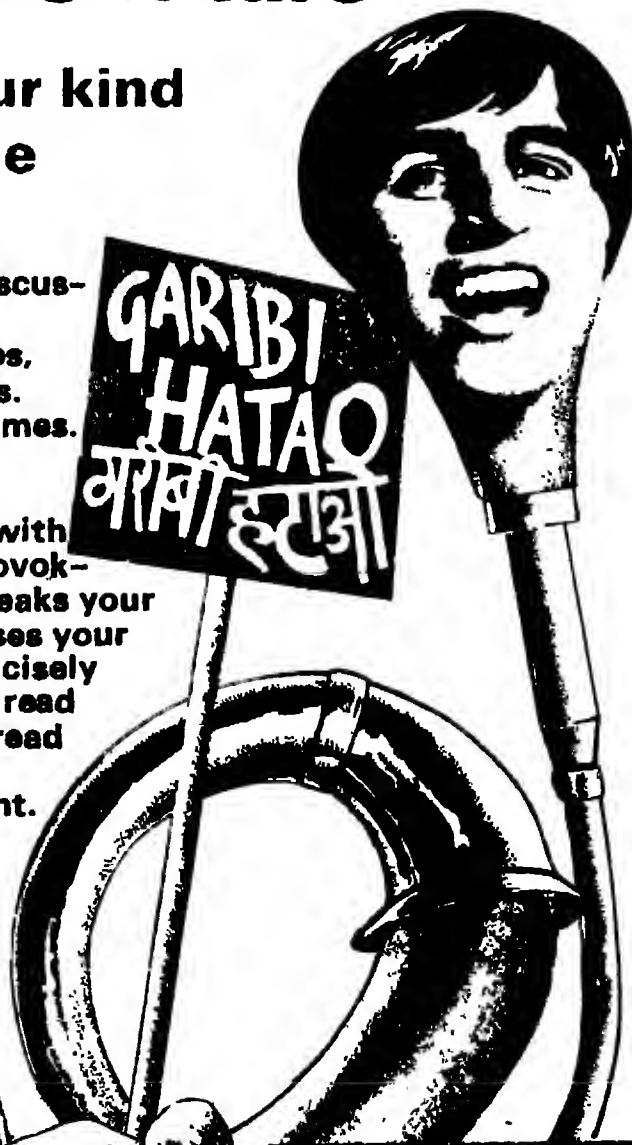
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The Art of a Lasting Marriage

BY RUTH STAFFORD PEALE

NOT LONG ago I wrote a book called *The Adventure of Being a Wife*.^{*} It was about a happy marriage—my own. The result was a flood of letters, many of them from people considerably less enchanted with matrimony. Wrote one wife, “We’ve been married only three years, and already our marriage seems frayed and moth-eaten. We both keep trying. Why can’t we make it work?”

It was clear from their letters that most of my unhappy correspondents *were* trying. But, obviously, the harder they tried, the more resentful they felt. They were convinced that they were putting more into marriage than they were getting out of it. And it was primarily this sense of imbalance and frustration and injustice that was causing the trouble.

In marriage or in any other relationship, the way people feel about other people depends on the way those other people make *them* feel.

^{*} Published in Great Britain by World's Work

The marriage ceremony requires each partner to make certain honest efforts: to love, to be faithful, and so on. But marriage is also an arrangement in which each of the contracting parties hopes and expects, quite legitimately, to have certain needs fulfilled. Not just such obvious requirements as food, clothing, money and sex, but three elemental emotional hungers that are common to the whole human race.

There's nothing very mysterious about these basic yearnings. If we're lucky enough to have a marriage partner who knows we have them and is willing to do something about them, we can almost forget that they're there. But if these psychic vacuums aren't filled, there's bound to be disappointment, disenchantment—and increasing friction.

The first of these requirements is this: *every person needs to feel that he is the most important thing in some other person's life.* That his happiness and welfare come first,

that he or she is Number One.

This sense of being able to claim complete priority in another person's affections is the corner-stone of marriage. But—and this is the point—the only way a person can be sure he has this priority is when the other person sends clear, frequent, unambiguous signals confirming it.

Signals? Each couple must develop their own. The love note in the pocket or under the pillow, the unexpected endearment, the compliment in public, the casual caress—these are clichés of the marriage books. But clichés become clichés because they work so well.

It is not enough to love someone routinely or passively or mutely. You have to dramatize it now and then. Time and again in "triangle" situations, I've heard the straying partner say defiantly, "Well, at least I know I've found someone who really cares about me!" No doubt, in many cases, the strayed-from partner cared just as much, but forgot, or never knew, that until it's expressed, love tends to remain just a state of mind.

Two-Way Affair. If you're not getting enough signals, it may be because you're not *sending* enough. The matter is worth thinking about, if you have a marriage that the moths seem to be getting into.

The second basic hunger is this: *everyone needs somebody else's strength*. Life is full of awkward burdens; no one should have to carry them all alone.

Even the strongest of us calls for help at times. The call ran through so many of those unhappy letters I received: "I need more help—help in my job, help with the children, help with money problems or in-law problems, help with *everything*—and I'm not getting it."

What the wives and husbands of these discouraged people failed to realize is that when you help your partner you are also helping yourself. Aside from obligation, aside from love and kindness and self-sacrifice, it's a matter of self-interest. If you want your own life to run smoothly, you've got to take some of the pressure off your partner. Marriage is a two-wheeled cart; if one wheel is bent out of shape, the whole thing is unlikely to go.

I happen to be married to a man whose career is based on preaching, lecturing and writing. Like many creative people, he's bored by detail. Basically, he's impractical; and he can be temperamental at times. So I try to take over the administrative side of our lives. I handle family finances, because he hates figures. I do what I can to shield him from distractions or interruptions. I try to arrange matters so that problems come at him one at a time. Part of my reward is his gratitude. But part of it is also the relief and satisfaction I get from living with a (mostly) unharassed and unfrustrated man.

Being a support goes beyond mere efficiency. It also involves constant and compassionate awareness of

where support is needed. I have a friend whose husband is a hot-tempered, head-strong man, as well as a lovable one. One Friday he came home from work in a rage because he felt he had been unfairly criticized. He sat down and wrote a furious letter of resignation.

Right Wavelength. His wife didn't try to dissuade him. She suggested some changes of wording. She found him an envelope and a stamp. "I must go and buy some things for dinner," she said. "I pass the post box. I'll take care of this."

She certainly did take care of it. On Sunday morning, she handed the letter back to her husband. "If you still want to post this," she said, "I won't object. But I thought you needed time to calm down."

The husband tore the letter up. "Thanks," he said. "I don't know what I'd do without you."

The third universal yearning—in a way it's the mirror-image of the second—is *to be needed*. All of us are constantly groping for a reason for our lives, a purpose for our existence. And since few of us are theologians or philosophers, the answer lies in feeling indispensable to someone else.

This sense of being needed was

completely missing in the letters I received from unhappily married people. Why? Either because they weren't giving enough of themselves to *be* indispensable, or because their efforts weren't being recognized or acknowledged.

I have no way of proving it, but I'm quite sure that the woman who complained of a moth-eaten marriage is starved for appreciation—and probably her husband is, too. "We both keep trying," she wrote. But does either ever thank the other for trying? Does either ever say, "I know you're making an effort, and I need that effort, and I appreciate it and love you for it"? That's all it would take to fill this deep vacuum in the soul, this desperate need to be important to someone, to be urgently needed.

Marriage, we're often told, is a difficult and demanding challenge. But perhaps we make it too complicated. In the last analysis, it's just a relationship in which human beings try to find release and fulfilment—and they don't ask so very much. To come first with someone. To be helped by someone. To be needed by someone.

Just three things, that's all. But they're enough.

CONDENSED FROM CHRISTIAN HERALD

Tall Order

AN UNUSUAL routing request was received by the American Automobile Association. A Maryland member asked to have a route mapped to Florida so that all bridges on the way would be at least 14 feet high. He was towing a caravan with a giraffe in it.

—AAA Newsletter

'The Godfather'—Home Movie for the Mafia



Problems beset the multimillion-dollar film—until the producer organized some unique type-casting

By NICHOLAS PILEGGI

AS WAS his custom before starting the drive home from work, the old man walked across the street in New York's Little Italy to buy some fruit. The vendor helped him select some prize oranges and, as a gift, handed him a perfectly ripened fig. The old man smiled, accepted the offering with a nod and started towards his car. It was then he spotted two gunmen.

He began to sprint for the safety of his car, but the gunmen were too quick. Loud shots hammered through the street, bright oranges rolled across the pavement and the old man collapsed. The people of Mott Street watched in silence from tenement windows, fire escapes and rooftops as the gunmen slipped away. Then, to spontaneous applause, the grim tableau came to life

CONDENSED FROM NEW YORK TIMES MAGAZINE (AUGUST 15, 1971), © 1971
THE NEW YORK TIMES CO., 229 W. 43 ST., NEW YORK, N.Y. 10036

and the old man—Marlon Brando—lifted himself from the ground, smiled at the crowd and bowed.

Brando was playing in a scene from *The Godfather*, Paramount Pictures' film version of Mario Puzo's best-selling novel about the American Mafia. At the same moment, Carlo Gambino, one of New York's real godfathers—Mafia leaders—sat, with five bodyguards, round the corner in a Grand Street café, holding eighteenth century Sicilian court. It was his duty as head of a Mafia family to hear at regular intervals the endless woes of racketeers, dishonoured fathers and deportable husbands. He was the final judge to those people who were ushered before him.

Back in Mott Street, two Mafiosi assigned to observe the film production critically watched Brando's performance in the title role.

They didn't like Brando's hat, or the way he wore his belt below his trouser loops. "That's not right," one said. "A man like that had style. He should have a diamond belt buckle. And a diamond ring and tie clasp. Those old bosses loved diamonds."

The two Mafiosi did approve the vintage cars and were amused by the street lamps, handcarts and prices, circa 1940, in shop windows. But they did not like the way the assassins fired their guns.

"They hold them like flowers," one said.

It may have started out as just

another multimillion-dollar film for Paramount, but before long its producers realized that to the Mafiosi themselves the making of *The Godfather* was like the filming of a home movie. Before Puzo's book, novels and films about organized crime left members of the Mafia cold. *The Godfather* was different.

True to Life. When it was published in 1969, word quickly spread across America's most regularly tapped telephone wires. The book was filled with underworld gossip, and its characters could be compared to live Mafia bosses, singers, film moguls and gunmen. It depicted not only their lives, but the lives of their children, wives, enemies and friends. It dealt with their strong sense of family and their passionate loyalties. But most important, it humanized rather than condemned them. The godfather himself, for instance, was shot because he refused to deal in narcotics.

Though certain Italian-Americans condemned Puzo for defaming all Italians, the author heard no such criticism from the society about which he had written. In fact, shortly after his book's publication, Puzo found that some Mafiosi were anxious to compare notes with him. Like other fans, they refused to believe that the book was all fiction. In Las Vegas he found a gambling debt which he had run up was somehow marked paid. On other occasions, bottles of champagne would arrive at his table unordered, and

men with sunglasses and diamond rings waved at him across darkened restaurants.

Six weeks before the Mott Street scene, Albert Ruddy, the film's producer, was uncertain whether he would be able to make the film at all. Paramount had been deluged with letters describing the project as anti-Italian and threatening demonstrations, boycotts and wildcat strikes. Ruddy had already run into trouble trying to negotiate with householders in suburban New York for a site that looked like a godfather's compound. The entire community and its bureaucrats had sabotaged his efforts.

Finally, Ruddy went in search of

a godfather of his own. In February, he had his first meeting with Joseph Colombo and a group of delegates of the Italian-American Civil Rights League. Colombo was not only the boss of a New York Mafia family, but also the founder of the League, with which he had established himself as the dominant force in New York's Italian-American community.

Friendly Persuasion. In the preceding year Colombo had drawn 40,000 people to a rally; had forced the U.S. Justice Department to order the FBI to stop using the terms "Mafia" and "Cosa Nostra" in its press releases; and had persuaded Frank Sinatra to come to New

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York to help him raise money at a concert. After 48 years of staying out of the limelight, Colombo had posed for pictures, signed autographs and generally comported himself more like a political candidate than a Mafia boss.

Ruddy approached Colombo confidently because he had previously worked out a tentative accord with Colombo's son, Anthony. Ruddy had agreed to delete "Mafia" and "Cosa Nostra" from the script. He had promised to allow the League to review the script and change anything it felt was damaging to the Italian-American image. And he agreed to turn over the proceeds of the film's New York premiere to the

League's hospital fund.

Platform Appeal. When Ruddy finally faced the League delegates they were looking very dour. He was at first confused. Colombo's son quietened a few of the early boos by telling the delegates about the script deletions Ruddy had agreed to make. He told the crowd about the proceeds of the premiere.

Then it was Ruddy's turn. He said the film would depict individuals and would not defame or stereotype a group. "Look at who's playing the roles," he said, about to continue with a list of non-Italian villains in the film.

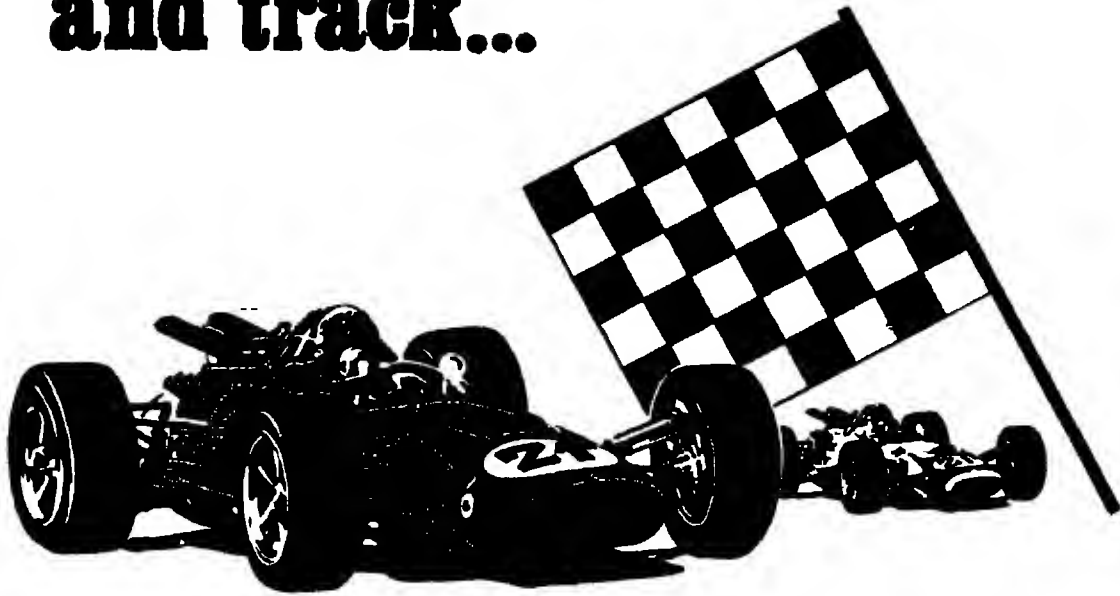
"Who is playing?" the elder Colombo suddenly asked.

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about that?

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'THE GODFATHER'—HOME MOVIE FOR THE MAFIA

Ruddy smiled. Now he understood. During all his discussions with Anthony, casting had never been mentioned. Soon, with Colombo pointing to one delegate after another and Ruddy nodding in agreement, the crowd began to cheer as bit players and extras were chosen. At the end of the meeting, Colombo himself inserted in Ruddy's lapel a pin designating him a captain in the League.

The moment he reached that agreement with Colombo, Ruddy's troubles were over. Suddenly, the threats of union woes evaporated. Protest letters from Italian-American groups stopped; planned demonstrations and boycotts were called off. A location for the godfather's compound was found, and Colombo's men made a house-to-house tour of the chosen neighbourhood, smoothing ruffled feathers.

Protection League. When the filming began, Ruddy found that with Colombo's men around, instead of being harassed by neighbourhood toughs, union disputes and corrupt policemen, *The Godfather* troupe was untouchable. Ruddy even managed to finish his location filming just before Colombo was shot and gravely wounded at a League rally on June 28.

Besides enjoying the benefit of Colombo's help with community relations, the Paramount people found they had uncovered the best of all possible technical advisers. Ruddy and his assistant, Gary Chasen, be-

gan to join Colombo associates for drinks and dinners. They visited a few of the League's neighbourhood offices and eventually were introduced to a couple of the men about whom their film was being made.

Soon such actors as Jimmy Caan, who plays the godfather's impetuous son, joined the socializing. Caan now says that he is indebted to a number of these men for whatever credibility he brings to his part. In fact, Caan was seen in the company of Carmine (The Snake) Persico and other alleged Mafiosi so often and had absorbed so many of their mannerisms that undercover agents thought for a while that he was another rising young gangster.

There was an aura about the production that was unmistakable. A few of the actors began to think of themselves as Mafia thugs. One supporting player got so confused about who he was that he joined a car trip to New Jersey to beat up blacklegs in a labour dispute. (As it turned out, they had the wrong address and couldn't find the strike-breakers.) And a few Mafiosi began to think of themselves as actors, demonstrating hand gestures and facial expressions again and again for their theatrical pals.

When *The Godfather* opened in New York last March, Paramount not only had the distinction of being the first organization in the world to make money out of the Mafia, but also of having conned Mafiosi into helping them do it.



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Personal Glimpses

ONE DAY when Mahatma Gandhi was standing in the doorway of a railway carriage as the train steamed out of the station, one of his shoes slipped off and fell on to the track. Bending down, Gandhi removed the other shoe and threw it alongside the first.

A mystified passenger asked him the reason for his action. Replied Gandhi quietly: "The poor man who finds the shoe lying on the track will now have a pair he can use."

—D. Patel

WHEN Sir John Gielgud was appearing in *Home* last year, in London, a virus infection forced him to turn down an invitation from Carol Channing to watch her award prizes at a sports event. He wrote to her: "Sorry, love, cannot attend. Gielgud doesn't fielgud."

—Edward Sothorn Hipp in Newark, N.J., *News*

BRITISH biologist, biochemist, geneticist and sage of science, Professor J. B. S. Haldane was a daring experimenter with himself as his own chief rabbit.

To study fatigue, he once shut himself for long periods in a closed chamber, the air charged with carbon

dioxide. Another time, he poisoned himself by swallowing bicarbonate of soda and hydrochloric acid, which led to his discovery that ammonium chloride could control convulsions in children. At the age of 35, he underwent a test in which blood was transferred from one part of his body to another.

To explain why he subjected himself to the laboratory, he said, "It is difficult to be sure how a rabbit feels at any given moment. Indeed, many rabbits make no serious attempt to co-operate with scientists."

—Alden Whitman, *The Obituary Book*

HOLLYWOOD's John Wayne comments on his art: "I don't go around shooting off my mouth about the problems of acting. In fact, I don't call myself an actor. I'm a *reactor*. I listen to what the other guy is saying, and I react to it. That's the John Wayne method."

—*The Wit and Wisdom of Hollywood*,
edited by Max Wilk

LOULA GRACE ERDMAN, novelist in residence at West Texas State University, in *A Time to Write*:

Writing is as individual as getting religion or falling in love, and everyone must approach it in his own way. I still believe, however, that it is im-

portant to set down a thought when it comes. I urge my students to do the same, illustrating my point with the story about the author who had such a wonderful idea that he fell on his knees to thank God for it. When he got up, he had forgotten what it was.

"Write it down first," I insist. "Thank God afterwards."

FRANK SINATRA recently disclosed that he had had a series of fainting spells 13 years ago. He went to a doctor in Los Angeles, who asked, "How much money do you earn, Mr. Sinatra?"

"Oh," replied Frank, "from 400,000 to a million dollars a year."

"In that case," the doctor said, "I suggest you go right out and buy yourself some red meat. You're suffering from malnutrition." —Melvin Goldfine, quoted by Herb Caen in *San Francisco Chronicle*

WINE-EXPERT André Simon sometimes went into extraordinary ecstasies in print over a favourite vintage. Author Charles Morgan introduced Simon at a wine-tasters' festival one evening, and then read a paragraph the latter had written, changing, he explained in advance, only a pronoun:

"Somewhat short in the nose, she gave more than she promised—a good fault. Full of life, silky, serious, robust and elusive; refined and expanding; she left behind, as she departed, a sense of complete gratification without the least feeling of satiety.

"Really," concluded Morgan, to everyone's amusement, "what are you describing, Monsieur Simon? Chateau Ausone 1909 or Cleopatra?"

—Bennett Cerf, *The Sound of Laughter*

POKER is lyricist Ira Gershwin's favourite relaxation, although he is plagued

with bad luck. His friends tell of a game in which he had a full house three times, but lost each time. When he lost a fourth time with a super hand, Gershwin announced, "I take an oath. I'll never pick up a card again." Then he said, "Unless, of course, I have guests who want to play."

After a moment's pause, he added another exception: "Or unless I am a guest in another man's house." He paused once more, and then recited a final exception: "Or whatever circumstances arise." —Leonard Lyons

U.S. SECRETARY OF STATE William Rogers, while discussing the role of women in executive affairs with Australian Foreign Minister Nigel Bowen in New York, mentioned the possibility of a woman becoming Secretary of State one day. When Bowen asked if a woman should accept the cabinet post, Rogers said, "Yes, indeed. It would serve her right!" —UPI

PRINCESS GRACE of Monaco, discussing her marriage, admits that Prince Rainier's word is law in matters of the family. But she has methods. "I lobby for a decision," she said. "I try to influence as much as possible."

Did that mean there was democracy in the family of an absolute monarch? "I don't know," she said with a smile which suggested she did know. "My husband refers to me as his *government* and I refer to him as my *leader*. When he's asked something involving both of us, he says, 'I'll have to consult my government.'"

—Curtis Bill Pepper in *Vogue*





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Gallup Poll on Young Americans

By GEORGE GALLUP

*Founder and director of the American
Institute of Public Opinion*

On the eve of the Presidential election, this famous pollster got some surprising answers from first-time voters

ANYONE with fixed ideas about American youth in this age of highly publicized protest and conflict had better be prepared to revise his views. Would you say, for example, that young Americans have considerable disdain for the forces of law and order? In our recent poll, the FBI won highest praise from well over half the young people interviewed.

Here is another eye-opener. Interviewers asked for reactions to 11 well-known individuals: President Nixon, Fidel Castro, New York Mayor John Lindsay, evangelist Billy Graham, Army Chief of Staff General Westmoreland, Vice-President Agnew, Senator Edward Kennedy, consumer advocate Ralph Nader, Governor George Wallace of

Alabama, Senator Edmund Muskie and Senator Hubert Humphrey.

The winner, rated "highly favourable" by 44 per cent and "highly unfavourable" by only five per cent, was Billy Graham. The loser, voted "highly favourable" by only one per cent and "highly unfavourable" by 48 per cent, was Fidel Castro.

This is only a small sample of the surprising, puzzling and occasionally disturbing answers produced during an extensive study recently undertaken by our polling organization on the attitudes of American men and women aged 16 to 29. The survey covers students and graduates, as well as young people not attending college; black and white; left, middle and right. It has turned

out to be one of the most revealing we have done in the last decade.

Our survey shows that contradictions frequently crop up in the attitudes of the young. For example, one young American out of every seven—or 14 per cent—could be described as a “militant leftist.” Furthermore, one out of every nine said he would like to leave the United States and spend the rest of his life in another country. Yet we also discovered that 72 per cent of this entire 16- to 29-year-old group give the United States a “highly favourable” rating. And slightly over two-thirds of the country’s young believe that America *is* “the land of opportunity” where anyone “can get ahead if he wants to.”

The Vietnam war is unquestionably unpopular, with 71 per cent saying that U.S. entry into that conflict was a mistake. Moreover, the college-educated group of today has developed such a strong anti-war sentiment that 37 per cent approve the action of young men who have left the United States to avoid military service. Of the whole group, 27 per cent approve, but a substantial 63 per cent disapprove.

Youthful contradictions regarding military spending and foreign policy are particularly apparent. A majority—56 per cent—favour cutting defence expenditure, while among the college-educated 68 per cent advocate this step. But both college and non-college youth decisively express their desire to keep the United

States militarily as strong as Russia. The survey further indicates that while America’s young people have no love for the Soviet Union—only four per cent give it a “highly favourable” rating—62 per cent say they have less fear of the USSR as they get older.

Constructive Ideals. We found that majorities of every age group, including those of differing political views, college and non-college, white and non-white, would approve a law requiring every man to spend one year in some form of service to the nation—either in the armed forces or in such areas as conservation, hospital work or the Peace Corps.

Most surprising of all, when men are presented with these alternatives, nearly four in ten opt for military service. Under such a law, it would appear that the armed services will be able to fill their requirements without conscription. (About one-quarter of all the males we interviewed had served in the forces, and of them nearly three out of four said it was “good for me.”)

How do America’s young assess business and labour? Business earns only a 27 per cent “highly favourable” rating; an even lower 24 per cent voted “highly favourable” for the unions. Asked if they felt that the government should place stricter controls on business, 49 per cent said yes, 41 per cent said no. In the case of labour unions, a higher percentage—57 per cent—favoured stricter

controls, while 34 per cent disagreed. Oddly enough, the extreme left holds virtually the same views with respect to more government control over unions as does the extreme right.

Although neither of the major political parties evoked great enthusiasm, the young are slightly more inclined towards the Democratic side than their parents. Our respondents reported that their parents were 42 per cent Democratic, 27 per cent Republican. When asked, "If you had to make a choice, which party would you prefer to work for in the 1972 Presidential election?" 27 per cent chose the Republican Party, 50 per cent the Democratic.

These are some of the specific findings of our questionnaire. To gain an insight into the "why" behind these views, we asked questions about family background, behaviour and life-style, and studied these answers with particular attention to the differences between the extreme left and the extreme right. By this technique I believe we uncovered many facts about young Americans not established by previous studies.

Familiar Attitudes. Young people tend to think as their parents do, especially if they love and respect them. Those with far-to-the-left political views usually hold their parents in relatively low esteem.

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Only 54 per cent of the extreme left give their fathers a "like very much" on our sentiment scale, while 58 per cent give the same to their mothers. Fifty-five per cent of the extreme-left group report that there has been "friction" with their parents, compared with 26 per cent of those in the extreme-right group.

Among young people who make up the far left, only 41 per cent regard themselves as "very happy," in contrast to 68 per cent on the far right who feel that way. When asked, "What does happiness mean to you?" those on the extreme right think first of family life; those on the left think first of "peace of mind." Family, in fact, rates fourth with the latter group, behind peace of mind, freedom, and getting along with and helping others.

We are led to conclude that a happy family life, or the lack of it, must be regarded as an important factor in determining a young person's political views. Furthermore, home discipline seems to be a major factor influencing this contrast in political views and contentment. For example, 23 per cent of those in the left group say their parents were "not very" strict. Only eight per cent of those at the extreme right make this response.

The influence of schools and teachers on the political views of young voters is difficult to measure, but our questions do shed light on this. For example, those who have attended college, when compared

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with those of the same age group who have not, consistently take a more liberal-radical view. More would oppose sending troops to combat a communist takeover by arms of Mexico (44 per cent to 29 per cent). By a vote of 42 per cent, they say that the communists pose "not very much" or "no" threat to the United States, while just 17 per cent of college youth vote that way.

A total of 38 per cent indicate that their teachers have influenced their political views. And when this college group is asked, "In what direction—towards the liberal left or the conservative right?" more than two out of three say "left."

Deductions. Out of our analysis of attitudes, at least two general conclusions seem warranted:

1. The general trend towards the Democratic Party and the political left will probably continue during the foreseeable future. The Republican Party will continue in its minority status; in fact, the lead of the Democrats is likely to increase.

2. Even after the Vietnam war ends, U.S. intervention in that conflict will influence the attitude of young Americans with respect to national security and the military establishment. Thus it will be progressively more difficult to obtain defence expenditures of a size comparable to those of the past.

What can be done to bring the forces of left and right into better

balance throughout the country? The responses of the young point the way. All the groups that we questioned, including both extremes, accept the principle that "high schools and colleges have a responsibility to see that students are presented with both sides when political issues are discussed." In all the groups, the vote in favour of this principle was at least 87 per cent.

The same agreement was found with respect to textbooks and reading matter used in courses that deal with political and social problems. The percentage of those who agree that "both liberal and conservative viewpoints should be presented" was also in the high eighties.

On a far tougher, more revealing question, a majority agreed with the principle of maintaining ideological balance. The question was: "In colleges where a majority of the professors in the social sciences are conservative or liberal, should the next professors appointed be of the opposite view—assuming that they are equally qualified to teach?" The vote was 54 per cent "yes," 27 per cent "no."

The important fact is that young Americans accept the principle that students should be exposed to both conservative and liberal viewpoints—with the opportunity and the right to make up their own minds on the basis of a full and fair presentation of both sides of political issues.

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I AM JOHN'S EYE

BY J. D. RATCLIFF

FOR concentrated complexities, no other organ in John's body can equal me. No larger than a table tennis ball, I have tens of millions of electrical connexions and can handle 1·5 million simultaneous messages. I gather 80 per cent of all the knowledge John absorbs.

John thinks of me as a miniature movie camera but I consider the comparison insulting. I'm much more sensitive than the biggest, costliest camera ever made. I am responsible for one of the greatest of all miracles—sight.

Today's world is giving me a hard time. I wasn't built for it. For John's prehistoric ancestors, the eye's main job was to see things at a distance—dangers to be avoided, game to be killed. Only lately have I been called on for continuous close-up work.

Look at my anatomy and you'll understand why I have difficulty

in adjusting to today's demands. First, my front window—my clear cornea. Smaller than a one paisa coin, it starts the seeing process by bending light rays into orderly patterns. Next, my pupil—an adjustable gateway for light. In bright sun it is nearly closed; on a dark night it is wide open. Up to this point there is nothing about seeing that a cheap camera couldn't do.

My wonders really begin with my lens—a tiny, oval envelope of fluid. My lens is surrounded by a ring of minute, superbly strong, unbelievably hard-working muscles. When they tense, my lens fattens for near vision; when they relax, it flattens for distant vision.

This was fine for John's caveman ancestors. As they were mainly interested in things six or more metres away, the muscles were relaxed most of the time. But John now lives in a

close-up world—lots of reading and desk work. This keeps my ciliary muscles tensed much of the time. They grow tired.

In front of and behind my lens I have two fluid-filled chambers. In front the fluid is like water; in the back it is about the consistency of egg white. The watery fluid keeps me firmly inflated. Both fluids must be absolutely clear to permit passage of light. Those "specks" John sees when he looks at a bright light are cellular remnants left over from his days in the womb when I was under construction. They will float aimlessly in his eye fluid for as long as he lives.

When John looks at some object, the light passes through my lens, which brings it into correct focus on my retina, a kind of onionskin wallpaper which covers the rear two-thirds of my interior. Except in John's brain, I don't think so much is packed into so small a space anywhere else in his body. Covering some five square centimetres, my retina contains 137 *million* light-sensitive receptor cells: 130 million shaped like rods for black-and-white vision, seven million shaped like cones for colour vision.

The rods are scattered all over my retina. Let a glow-worm appear at night and a complex chemistry gets under way. The faint light bleaches rhodopsin, a purplish-red pigment in my rods. The bleaching process generates a tiny wisp of electricity—a few millionths of a volt, far too little

to tickle a mosquito. This feeds into my straw-size optic nerve and is transmitted to John's brain at about 500 kilometres per hour. The brain interprets the incoming signals and hands down its verdict: a glow-worm. All of this intricate electrochemical activity has been done in about .002 of a second!

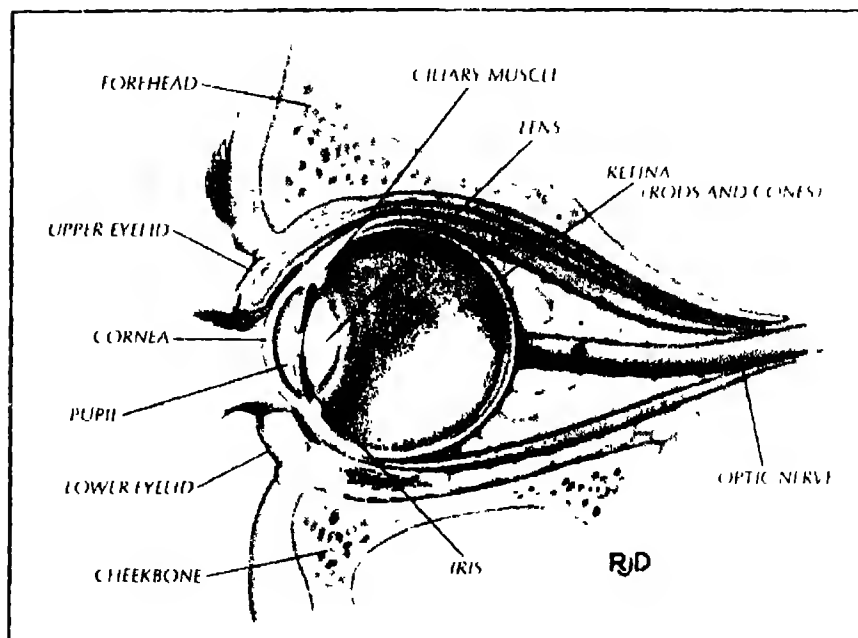
If my rods seem complex, my cones are far more so. They are concentrated in the fovea, a pinhead-size, yellowish depression at the rear of my chamber. This is the centre for acute vision—reading, any close work—and for colour. A leading theory is that these cones, too, have bleachable pigments, one each for red, green and blue. Like an artist mixing paints on a palette, John's brain blends these colours to make scores of other hues.

If anything should happen to go wrong with this intricate electrochemical process, John would be colour-blind—as one in eight men is to some degree. In dim light, activity of my cones diminishes, colour sense vanishes and everything becomes grey, as my rods take over.

While John sees *with* me, he sees *in* his brain. A crushing blow at the back of his head, severe enough to destroy the optical centre of his brain, would produce permanent blindness. A lesser blow and he sees "stars"—a chaotic electrical disturbance. John gets positive evidence of the brain's role when he dreams. He "sees" pictures, even with my lids closed in total darkness. Had he

been born blind, he would dream in terms of other sensory stimuli: touch, sound, even smell.

John wasn't born with the eyes he has today. At birth, he could see only light and shadow. In the first few months he was long-sighted, like his caveman ancestors. To study his rattle, he held it as far away as possible from his face.



At first, John's eyes were poorly co-ordinated; I'd wander in one direction, my partner in another. Our wandering worried John's mother. It shouldn't have. A few months after birth we were moving in exact unison. By the time John was six, his vision was excellent. But my peak sight didn't come until he was eight.

When he was young, John used to read in dim light. His mother warned that he was "ruining" his eyes. Nonsense. The young see

better in dim light than adults; and viewing under even the most adverse circumstances does no harm.

I have a number of other unusual attributes. Tiny though they are, my muscles, milligram for milligram, are among the body's strongest. In an average day, I move about 100,000 times—to bring objects into sharp focus. John would have to walk 80

kilometres to give his leg muscles similar exercise.

My cleaning equipment is similarly striking. My lachrymal glands produce a steady stream of moisture — tears — to flush away dust and other foreign material. My eyelids, of course, act as windscreen wipers. John blinks three to six

times a minute—more when I am tired. This keeps my cornea moist and clean. The tears also carry oxygen to the cornea and a potent microbe-killer, called lysozyme, as a guard against infective bacteria.

I try to ward off fatigue by resting as much as possible. I get time off when John blinks. And my partner and I relieve each other: for a while I may carry 90 per cent of the work load, while John's other eye lazes; then it goes to work and I rest.

Nature gave me superb protection,

placing me in a bony cavern with protruding cheekbones and forehead to act as shock absorbers for direct blows. She also gave me supersensitive nerves to sound the alarm if there should be a potentially damaging intruder such as a bit of grit.

Still, I do have my troubles. My focusing apparatus often fails to work perfectly. Glasses can correct 95 per cent of this trouble. Disease is a more serious problem. One potential disorder is really a plumbing problem—either too much fluid entering me or too little draining away. Pressure builds up, reducing the blood supply to my optic nerve. This is glaucoma.

In severe instances, glaucoma can cause permanent blindness in a few days. More often it is a leisurely performer, producing symptoms so mild they can go unnoticed. These symptoms: coloured halos around bright lights, loss of side vision, difficulty in adjusting to the dark, a blurring of vision.

At his age, John has one chance in forty of glaucoma damaging his sight, or actually blinding him completely. An ophthalmic surgeon can test for glaucoma simply by pressing a little gadget called a tonometer against my eyeball. The treatment for glaucoma? This can

be drugs in drop form, or surgery.

Astigmatism is another of my common ailments. In this one, my cornea is not a spherical surface and distorts vision like a bubble flaw in a piece of glass. Glasses correct this condition. A detached retina is more serious. It occurs when my retinal wall-paper blisters or peels, and usually announces itself with flashing lights, image distortion, blurring spots. A surgeon can "tack" my wall-paper back in place with 80-per-cent chance of success.

Both my cornea and my lens—normally totally transparent tissue—can cloud and lead to blindness. If it's the cornea, John can regain sight with a corneal transplant. If it's the lens, he will need a cataract operation, and either thick glasses or contact lenses afterwards.

Fortunately, John has so far escaped all these things. Just the same, I am growing old—like John's other organs. The transparency of my lens is lower, accommodation muscles are weaker, hardened arteries are diminishing blood supply to my retina.

These processes will continue, but John shouldn't worry unduly. The odds are heavily in favour of my providing him with serviceable vision as long as he lives.

Sweet Nothings

THERE are many people to whom one has nothing to say, and that's what makes social life so tiring, because you do not dare remain speechless with social acquaintances; you must, in fact, talk a great deal without saying anything.

—Geneviève Antoine Dariaux, *The Men in Your Life*



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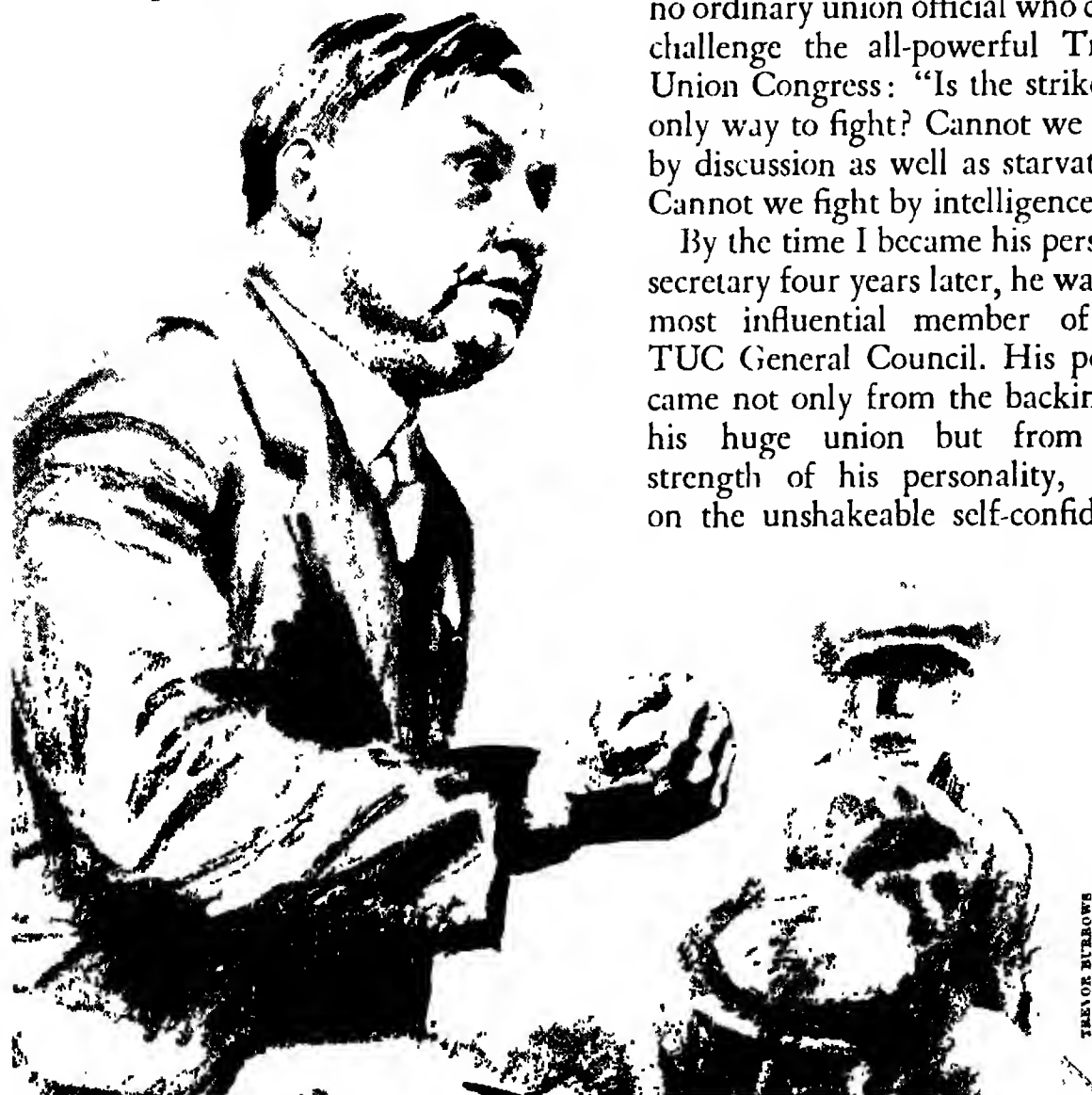
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BY IVY SAUNDERS
as told to PETER BROWNE

A mighty British trade union leader and a statesman, he brought warmth and humanity to the corridors of power



I FIRST met Ernest Bevin when I took a job as a typist with the Transport and General Workers' Union of which he was General Secretary. Everything about him reflected the power of his personality: the broad shoulders and rugged features, the rolling gait as he stumped along in thick-soled boots, the robust country accent of his "Mornin'" when he arrived at the office.

It was 1928, a time of strikes and industrial unrest. I remember typing his speeches and thinking that it was no ordinary union official who could challenge the all-powerful Trades Union Congress: "Is the strike the only way to fight? Cannot we fight by discussion as well as starvation? Cannot we fight by intelligence?"

By the time I became his personal secretary four years later, he was the most influential member of the TUC General Council. His power came not only from the backing of his huge union but from the strength of his personality, built on the unshakeable self-confidence

TREVOR BURROWS

of a natural leader. His public image was of a tough yet flexible negotiator, but the private Bevin was, as Clement Attlee said, a much loved man. To the workers he was Ernie, as to him they were "my people." In the Depression, many unemployed who walked from the north to London in search of jobs visited our offices. If I told Bevin, "There's someone here in trouble: will you see him?" the caller never went away empty-handed.

A friend once defined him as a human being with every human instinct alive and unblunted, possessing a fund of native shrewdness, and as genuine as nature itself. This was the massive West Countryman who became the greatest leader in the history of the trade union movement; who organized the total wartime mobilization of the nation's manpower; who, as Foreign Secretary, encouraged America in her global role and set in motion the European response to U.S. aid, which led to the Marshall Plan and the Organization for European Economic Co-operation. Yet he had none of the conventional qualifications for high government office. As he explained to King

IVY SAUNDERS worked at the Labour Party HQ from 1928 until her retirement in 1960, and was Ernest Bevin's secretary for 13 years. When he joined the Government she helped to manage his parliamentary constituency of Wandsworth, London, as well as acting as his liaison with the Transport and General Workers' Union. She now lives in Clacton-on-Sea, Essex.

George VI, who asked how he had gained his wide knowledge of public affairs: "Sir, it was gathered from the hedgerows of experience."

Bevin was born in 1881 in the Somerset village of Winsford, on the fringe of Exmoor. His mother—Mercy Bevin, who was the local midwife—died when he was eight. Ernest lived with his sister until he was 11, when he went to labour on a farm for 50 paise a week and his keep. At 13, he left to seek his fortune in Bristol. Eventually, by working overtime as a van driver, he managed to earn Rs. 38 a week—a good wage in a city where 5,000 men were out of work. Angered by the economic injustice he saw, he rallied local carters and drivers to form a carmen's branch of the Dockers' Union. At 30, he was a full-time union official, and in three years one of its three national organizers.

Practical Man. He first became known as a national figure in 1920, when a dockers' wage claim was referred to a Court of Inquiry. The actor's sense of drama which I saw in him at TUC conferences served him well in those early days. When the shipowners' counsel claimed that a docker and his family could live adequately on Rs. 73 a week, Bevin cooked exactly the amount of food the budget allowed for dinner for a family of five and produced the tiny portions on five plates. "I ask the court," he said, "to examine the dinner which is considered adequate to sustain the

strength of a docker hauling 71 tons of wheat a day on his back."

Christened by the Press "the dockers' KC," Bevin won his case. As he intended, he had shown the unions other ways to fight than by crippling their resources in a strike.

Bevin reinforced his reputation by merging 14 different unions into the single, powerful Transport and General Workers' Union, which he led to a membership of a million and a quarter. In the 1930s, he battled constantly against its infiltration by communists. Never a man to mince words, he confronted Russian ambassador Ivan Maisky at a reception: "You have built up the Soviet Union and have a right to defend it. I have built up the Transport Union and if you try to break it I'll fight you to the death."

Strong principles guided Bevin's every action. "Once his word was given," Lord Chandos wrote, "nothing would shake it. It had the cachet of a guarantee by the Bank of England." To him, an agreement between union and employer was sacrosanct, an unofficial strike a stab in the back for union power.

To Bevin, work was his life. He began on office papers at home at 6 a.m., and I have known him to go for 35 Sundays without rest. We who were on his staff found him demanding but always understanding. One Easter, when a busmen's dispute had kept me in the office through the bank holiday, he lumbered in and with a broad grin

planted a huge chocolate Easter egg on my desk.

Like Churchill, Bevin was one of the first to recognize the threat of Nazism—and one of the few with the courage and foresight to speak out. As he told his union's executive council early in 1937: "From the day Hitler came to power, I have felt that the democratic countries would have to face war." Its outbreak came as a fresh challenge. Immediately Bevin began organizing a flying column of dockers to speed from one port to another, unloading vital supplies. And in a few weeks he was working quietly behind the scenes with Winston Churchill, then First Lord of the Admiralty, in what was to become a historic partnership.

Comrades in Arms. The two men, so different in background and outlook, had long been political enemies, but each respected the other, and patriotism was a bond between them. As Churchill wrote in *Their Finest Hour*: "I was much in harmony with Bevin in the white-hot weeks."

When Churchill became Prime Minister in 1940, he enlisted Bevin—until then not even a Member of Parliament—as Minister of Labour and National Service, and Parliament passed a Bill giving the one-time farm boy from Somerset greater authority than had been held by one man in Britain since Oliver Cromwell. It empowered Bevin to direct any person in the

United Kingdom to perform any services he might specify.

He achieved astonishing success, not least because, as one friend expressed it, "he mirrored the souls of millions of Englishmen." His great strength was that he understood ordinary people. Told of absenteeism in war factories among women whose men were home on leave from the services, he said, "That's not absenteeism, that's human nature"—and he saw to it that the women, too, were given leave for such occasions.

Among his achievements, he provided bases for more than a million U.S. servicemen in Britain, and organized the specialized work force which, in total secrecy, built "Mulberry," the floating harbour used during the Normandy invasion. Altogether he was responsible for getting nearly 23 million men and women directly involved in the war effort. He went to great lengths to ensure their welfare. He would come over and discuss with me his schemes for keeping up morale and easing the monotony of repetitive but vital jobs: factory canteens, comfortable hostels, medical services, "music while you work."

Bevin remained completely unaffected by his enormous power. When Churchill discovered that he polished his own shoes, he tried to persuade him to take a personal servant. "Please not," protested Bevin. "I get such splendid ideas when I'm cleaning my boots."

Offered a Companionship of Honour by Churchill when the war in Europe ended, Bevin declined. He deserved no special honours, he said, for doing his job like thousands of others in the interests of the nation. "Beyond all question," demurred the *Manchester Guardian*, "the work he did in mobilizing manpower and industrial resources could have been done with equal efficiency, sure judgement and resolute purpose by *no other man*."

The constant strain had told on him. According to Lord Moran, Churchill's doctor, "Bevin was already a very sick man, suffering from alarming attacks of heart block in which he would lose consciousness. But, full of guts, he was determined to do his job and would not give in." Now, at 64, there was another job to do, and one completely new to him. When Labour won the 1945 election, Clement Attlee made Bevin Foreign Secretary, explaining that in dealing with Russia, "I thought a heavy tank would be needed."

Winning Ways. In Whitehall, career diplomats looked askance at their new leader, whom U.S. Secretary of State James Byrnes dubbed "Bevin the blunt Briton." But he became, as Roy Jenkins has said, "almost certainly more popular with his officials than any Foreign Secretary within living memory." They appreciated his capacity to inspire loyalty and to give it—and his use of simple, direct

language instead of the polite euphemisms of diplomacy. He gave as the most important objective of his foreign policy "just to be able to go down to Victoria Station and take a ticket to where the hell I like without a passport."

But Bevin had no illusions about the tasks he faced in postwar Europe. Once he realized that Stalin was bent on extending communist influence, Bevin's plan was to balk each move until American public opinion could be roused to the threat of Russian expansion. In 1947, when only Britain was opposing Soviet intrigue in Turkey, Greece, Persia, the Middle East and Trieste, he decided that the crucial moment had

come. He told George Marshall, the new American Secretary of State, that Britain's war-weary economy could no longer stand the burden alone.

Rescue Operation. Within three weeks there came a fundamental change in U.S. foreign policy. President Truman announced that eastern Mediterranean security was America's concern, because "totalitarian regimes imposed on free peoples, by direct or indirect aggression, undermine the foundations of international peace and hence the security of the United States."

Later that year came the much more ambitious Marshall Plan—and

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again, it was Ernest Bevin who took the European initiative. He heard that George Marshall, speaking at Harvard, had suggested that American economic aid for the reconstruction of Europe might be arranged if the nations organized themselves to take advantage of such help. To Bevin the news was "like a lifeline to sinking men." Marshall himself later admitted that he had had no particular plan of action in mind. But within hours of the speech Bevin had cabled his appreciation to Washington and was on the phone to the French Foreign Minister. By the end of the day, he had set in motion the moves which led to Marshall Aid and the 16-nation Organization for

European Economic Co-operation.

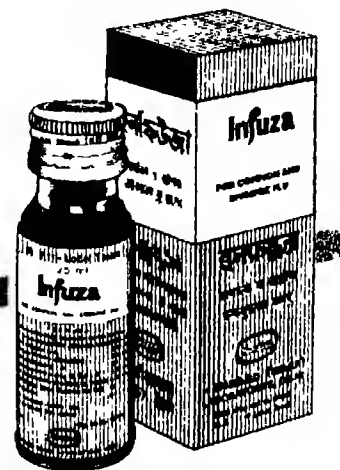
The Soviet take-over in Czechoslovakia, in February 1948, convinced Bevin that economic aid alone was not enough. Already he had been shaping a defensive alliance between Britain, France, Belgium, Holland and Luxembourg; and in March the Brussels Treaty was signed. Then he pushed ahead with his idea of extending it into an Atlantic security pact in partnership with Canada and the United States. In April 1949 he flew to Washington to sign the North Atlantic Treaty, with its key clause: "An armed attack against one or more [of the member nations] in Europe or North America shall be considered

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Hammond

an attack against them all."

Observed Dean Acheson, the polished U.S. diplomat, "The British don't understand what a priceless possession they have in Ernie Bevin. They ought to take all unimportant work off him so that he can go on as long as possible doing the job that matters."

There was not long left. Bevin had inspired, as King George VI told him, a pact which was "a landmark of great importance in the history of the world," but his health was fast failing. Whenever he came to Transport House for a chat with us he would sink into his old chair, obviously exhausted, often falling asleep; and within ten minutes the Foreign Office would be on the phone, asking me to get him back for a meeting.

One April Saturday in 1951, just after his 70th birthday, he phoned me at home. He had been in bed

for several days, and much to his disappointment had to forgo the afternoon's England *v.* Scotland soccer match at Wembley. But he had insisted that his wife and personal detective go—"I told them to go and enjoy it. Besides, I haven't started on my dispatch box yet."

Two hours later, he was dead. "He was opening his box," his wife said afterwards. "He fell back on the pillow, and they had all the work in the world to get the key out of his hand."

Those of us who worked with him will never forget him, and history may well rate him one of Britain's greatest statesmen. "Ernest Bevin," said *The Times* before his ashes were buried in Westminster Abbey, "had gained a place in men's hearts few could equal: he was mourned not only by his own countrymen, but by all the free nations of the world."

Bowled Out

A BALL came crashing through Mrs. Smith's kitchen window. Soon afterwards, a small boy rang the doorbell and announced, "My father will be here in a minute to mend the window." Sure enough, a man came up the steps and Mrs. Smith gave the boy his ball back.

After the man had replaced the broken pane, he said, "That'll be Rs. 25."

"What?" Mrs. Smith gasped. "Wasn't that your son?"

"Don't tell me you aren't his mother?" came the startled reply.

—Richard Depner

Flash of Inspiration

A MAN who spent his holiday touring with his family was asked if they had passed through much beautiful scenery. "We must have," he replied. "After all, we averaged 800 kilometres a day!"

—*Sunshine Magazine*



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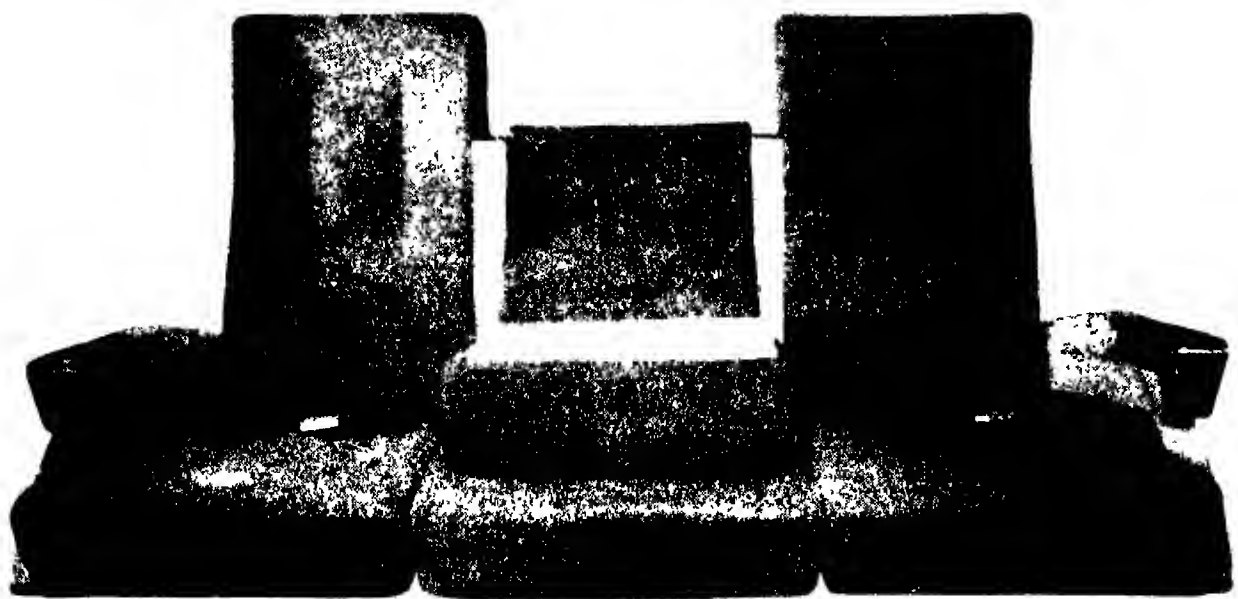
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BY EMILY AND OLA D'AULAIRE

Lovable and inoffensive, Australia's ace burrower is the odd man out in the animal kingdom

HE is a chubby brown creature with the build of a bulldozer and the ambling gait of a bear. His compact, low-slung body is dog-sized, hard as a rock and almost tail-less. His head is bullet-shaped with tiny button eyes, a wide nose and short, erect ears. And with his long, shovel-like claws, he looks every bit the digging machine he is: a 36-kilogram, 106-centimetre-long creature that can burrow out of sight in minutes, leaving a man-sized tunnel in his wake.

This is the wombat, one of the world's largest burrowing animals and one of the lesser known of the Australian marsupials. "The wombat is nature's clown," says Dr. Peg Christian, a veterinary surgeon in Adelaide, who has reared and treated dozens of them. "It has all the parts

that other animals didn't want." The wombat has so many odd parts, in fact, that scientists were unable to categorize it with any other living creature; they had to create two zoological families to cover the complete range of the species: *Vombatus* and *Lasiornhinus*.

Like so much of Australia's unique fauna, the lineage of wombats goes back some 65 million years, to the time when the reign of the dinosaur was waning and a new breed of warm-blooded, fur-bearing animals was beginning to take over. The early ancestors of the wombat were small tree-dwellers who swung from branches with long, monkey-like tails, or gripped the ancient trees with their opposable big toes. The wombat still carries that toe, though the tail degenerated to a

mere rudiment when his forefathers switched from treetops to burrows.

The present day version of the wombat was first spotted by Europeans when *Sydney Cove*, coming from India, was wrecked in Bass Strait in 1797. The crew managed to swim ashore and the castaways survived by eating wombat, later observing that "it resembled pork in flavour, though not in colour, being red and coarse." According to contemporary reports, the survivors were finally rescued, and a wombat specimen, preserved in alcohol, was shipped to London, where it was examined by a gathering of august zoologists. "Curiously divergent," was the reaction. "We've seen nothing like it before."

And, indeed, there is nothing quite like the wombat. There are two branches of the family: hairy-nosed wombats have silky fur and pointed ears; naked-nosed wombats have coarse hair and shorter, round ears. Their closest counterpart in looks is the European beaver, to which they are in no way related. Strangely, the wombat even possesses the chisel-like front teeth of a beaver—teeth that must be trimmed through constant chewing to prevent them growing into long spirals and becoming so useless that the animal starves.

Razor Sharp. Thanks to his dental equipment, the wombat is an efficient vegetarian who feeds mainly on grasses, shearing them off neatly at ground level like a lawn-mower.

As he grazes, his five-toed feet leave tracks remarkably like those of a small human. Many a "lost child" has been followed, only to find the trail ends at the entrance of a wombat warren.

The wombat is well adapted for subterranean living. By sitting solidly on his rump and hind legs, digging with his forefeet and thrusting earth to one side, he bores through baked, rocky ground in short-lived but impressive bursts of speed. His torpedo-shaped body and stout muscular legs help him scamper easily through his twisting tunnel networks, which may total 30 metres in length.

The animal's mania for tunneling sometimes has unexpected results. At Kadina, in South Australia, a wombat is credited with unearthing the state's largest copper field. A boundary rider spotted pieces of ore outside the marsupial's burrow and when tests found the ore to be unusually rich, a crew of men arrived with their own burrowing equipment. The result: the profitable Moonta-Wallaroo Mines.

The wombat has almost no natural enemies, thanks to his tough, leathery skin which is nearly impenetrable to teeth. His lower back is further protected with plate armour in near-armadillo fashion—hard layers of dead skin and cartilage fused to underlying bone. Should a dingo or fox be so unwise as to enter a warren, the wombat will brace his legs and push up,

thus crushing the invader's head against the roof of the tunnel.

Retiring and shy in the wild, wombats are easy to tame and quickly learn to follow people around like dogs. "They are intelligent, too," says Tony Carrick, keeper of small mammals at Sydney's Taronga Park Zoo, "and this is unusual for marsupials, who tend to be rather dim-witted." One young wombat that Carrick reared recently slept in bed with him, was house-trained and even learned to open doors and cupboards.

Like all wombats, it had a good sense of smell and of hearing but poor eyesight. Often, it would wait patiently by a pair of Carrick's trousers, which were draped over a chair, unaware that the owner wasn't in them!

"There is one problem about keeping a wombat as a pet," Carrick points out. "You can't have a fine lawn and a wombat too." The animals tend to make any garden look as if it had suffered a bombing attack.

Peg Christian, the Adelaide vet, has reared wombats for years and seems not to mind the damage to her lawn. "Wombats are affectionate creatures, much gentler than the koala, but they need to dig to keep



Bong, the six-year-old naked-nosed wombat at the London Zoo, is one of only two in Britain; the other is at Paignton Zoo in Devon

their nails trimmed," she explained, spooning oatmeal to a young female named Donnie—so called because, like Don Bradman, the great cricketer, "she's a good 'bat." Tame wombats learn to come when called and romp like puppies, although, as Dr. Christian observed, "A gambolling 36-kilogram wombat is something like a gambolling elephant."

In the wild, wombats lead live-and-let-live lives, socializing chiefly in the mating season. Then the female builds a chamber at the end of one of the tunnels and, after a brief gestation period, gives birth to a baby about the size of a peanut. This foetal wombat crawls from the mother's birth canal, navigates the hairy abdomen and makes

straight for the pouch, which is tightly closed by a set of circular muscles in drawstring fashion. Inside, the young wombat fastens on to one of two teats where he will remain for six months.

Not fully mature until two and a half years after leaving the pouch, wombats can live for as long as 37 years, according to David Fleay, a Queensland naturalist. They are thus the Methuselahs of marsupials.

When Fleay was a university student, he owned a pet wombat named Essie who waited patiently beneath his desk during classes. In the corridors, however, Essie liked to lumber about nipping students in the legs and then, turning abruptly, charge at top speed towards Fleay. "Wombats have an evident sense of fun," says Fleay.

Unique, lovable and inoffensive, it is ironic that these creatures, so easily attached to man, should have man as their worst enemy. The problem stems from their constant tunnelling, which may undermine graziers' fences, letting rabbits and dingoes in—and sheep out. As a result, wombats are considered pests and have been shot, poisoned and trapped in such numbers that they have been wiped out in many areas. Some people feel they may be facing extinction.

What can be done to save the wombat from the fate of the dodo? "The first step," declares Dr. Chris-

tian, "is to make the public aware of the situation. Indiscriminate killing must stop. Reserves must be established where wombats may rebuild their numbers in peace."

In June 1967, the International Union of Conservation of Nature and Natural Resources placed the hairy-nosed wombat on the list of the world's rare and endangered animals, and several private organizations are taking steps to preserve them. The Natural History Society of South Australia has established the 2,000-hectare Moorunde Wildlife Reserve, exclusively for the preservation of the hairy-nosed wombat. Help has also come from overseas. A group of American businessmen, members of the Chicago Zoological Society, recently donated Rs. 3.8 lakhs in order to buy about 5,200 hectares of former sheepland north-east of Adelaide for a wombat reserve.

These are heartening beginnings, but more reserves are needed. "For too long," says Helge Hergstrom, a spokesman for the Natural History Society of South Australia, "Australians have held the attitude, 'If it moves, shoot it.' The loss of the wombat would be a loss to the whole continent's complex web of life—another hole in the fabric of creation."

Hopefully, through increased public concern, the wombat will weather the onslaught and survive.

REMEMBER, this *planet* is also disposable. —Paul Palme

BOOK CHOICE



DUCE! **THE DAYS OF** **RECKONING**

BY JAMES COLLIER



BOOK CHOICE

DUCE! THE DAYS OF RECKONING

BY RICHARD COLLIER



Gone was the time when Benito Mussolini, creator of Fascism, had stood on his balcony in Rome, hands on hips, jaw out-thrust, receiving the delirious adulation of thousands. By 1943 his fateful alliance with Adolf Hitler had brought ruin to Italy and to all his ambitions. Deposed, stripped of every office, "Il Duce" became a pathetic pawn in Hitler's desperate struggle to stave off an Allied victory.

Drawing on hundreds of personal interviews with people involved, Richard Collier paints a vivid picture of those terrifying days. In intimate, close-up portraits, the fate of the man who had unleashed Fascism on his nation reaches its pitiable, ignoble end.

PHOTOGRAPH: ARNOLDO MONDADORI

FOR TWO decades Rome had waited for this night. From a commandeered radio station on the Via Asiago, the incisive tones of a newsreader rasped through thousands of wireless sets: "Italians! His Majesty the King-Emperor has accepted the resignation of Benito Mussolini and has nominated as Head of the Government Marshal Pietro Badoglio."

Across the seven hills of the ancient capital, the news leapt from street to street, and the city which had seen the triumphs of Caesar and Domitian now witnessed an explosion of emotion that none would ever forget.

"You've heard, eh?" said a guard at the Regina Coeli Prison to a political detainee. "It isn't Mussolini any more, it's Badoglio." Then hastily, as millions of others were also doing, he made it plain where he stood. "I was never a Fascist!"

Suddenly, it seemed, there were no Fascists anywhere in Italy, and black shirts, the uniform of the Fascist Party, were as rare as frost in summertime.

That afternoon, July 25, 1943, *Il Duce* (the leader), Benito Mussolini, whose 20-year dictatorship had made the word "fascism" synonymous with tyranny, had been deposed and stripped of every office.

Forgotten were the turbulent days of 1922 when Mussolini and his bands of Fascist militia had staged their March on Rome and imposed

a Fascist government on King Vittorio Emanuele III.

The triumphs of the early years, the victory over Ethiopia in 1936, the declaration of a second Roman Empire while 400,000 voices cried their approval: "Duce! Duce!"—these were gone, lost in the maelstrom of a world war which he had entered with his Axis partner, Adolf Hitler. His Army had been defeated in North Africa, his Air Force and Navy were decimated, Rome was under bombardment, and 160,000 Allied troops had landed in Sicily.

With the Duce's disappearance—there was no explanation of his fate or whereabouts—so complete was the chaos in Italy that many people thought the war would end quickly. But the last dramatic act in Mussolini's life was yet to be played. In Germany, desperate plans to save the Duce were being prepared.

Fearing a mass Italian defection from the Axis cause, Hitler was planning a counter coup, code-named "Operation Alaric." On the day Mussolini fell from power only eight combat-ready German divisions had been stationed in Italy.

By the next dawn three more divisions, their steel helmets daubed "Long Live Mussolini," were swarming south across the Alpine passes. If Operation Alaric became a reality, more troops would be sent,

but there was one essential requirement: the rescue of the Duce.

That night, the man whom Hitler chose to find Mussolini was summoned to the Fuehrer's headquarters in Rastenburg, Germany. He was S.S. Captain Otto Skorzeny, and his qualifications for the mission were excellent.

A dark, burly giant, his cheeks scarred from a student duel, Skorzeny was the chief of a top-secret school where he trained Nazi agents in every skill from self-defence to sabotage.

Hitler had never met Skorzeny before this night, but he spoke emotionally to the S.S. Captain. "Mussolini, my loyal comrade in arms," he said, "was betrayed yesterday by his king and arrested by his own countrymen. I will keep faith with my dear friend. He must be rescued promptly or he will be handed over to the Allies."

Skorzeny went to work immediately, bombarding Berlin with teletype messages and phone calls. He wanted 50 agents from his school, all Italian-speaking.

He asked for tropical uniforms, civilian suits, weapons and silencers, laughing-gas, tear-gas, smoke-screen apparatus and 30 kilograms of plastic explosive—plus, just for good measure, a stock of forged British pound notes and two complete outfits for Jesuit priests.

But once installed in Italy, Skorzeny and his *aides* ran into a

problem. Until recently, Hitler had expressly forbidden intelligence work against his ally. There were years of groundwork to be made up. The first reports that trickled into the office of the German Police Attaché in Rome were bewildering in their variety. Mussolini had committed suicide; the Duce was recovering from a stroke in a northern clinic; he was disguised as a humble Blackshirt on the Sicilian front.

To mark Mussolini's 60th birthday on July 29, Hitler sent a complete set of Nietzsche's works bound in leather.

Hoping to make the delivery in person, Field-Marshal Albert Kesselring, commander-in-chief of the German Southern Command, approached both the King and Badoglio.

He learned only that Mussolini was well and under the King's personal protection. In due time, Badoglio promised, he would pass on the Fuehrer's gift.

So it went for the next month. Then S.S. Lieutenant-Colonel Herbert Kappler, the German Police Attaché, had a stroke of luck. A keen colour-photographer, he often took early morning drives on the old Appian Way, both to increase his stock of slides and to meet an informer from the Italian Ministry of Home Affairs.

About September 1, the informer handed Kappler a coded message routed to the Ministry from a police

inspector. It read: "Security precautions around Gran Sasso d'Italia have been completed."

A Broken Peasant

EVER since being deposed, Mussolini had been shifted from place to place in a wily game of hide-and-seek to keep him from falling into Skorzeny's grasp. Soon after his arrest, he had been taken to an office in Rome's Legnano *Carabinieri* Barracks. A few days later he was stealthily moved to the prison island of Ponza. Next, he turned up at the sleepy naval base of La Maddalena off the northern tip of Sardinia. Skorzeny had traced him there, but at the last minute the Duce was whisked away—this time to the Gran Sasso mountain range in central Italy. It seemed a perfect hide-out.

One hundred and twelve kilometres east of Lake Bracciano, the sharp spur of Monte Corno of Gran Sasso jutted nearly 3,000 metres above sea level, snow-crowned and rugged, the loftiest peak in the Italian Apennines.

At its foot lay a plateau, 2,000 metres high, a favourite with skiers. Sole access to the area's one hotel was a cable railway which climbed 900 metres from the village of Assergi in the valley. As Skorzeny now suspected, Mussolini, under guard, occupied a room in this otherwise deserted resort.

Rumpled, unshaven, his black eyes enormous in a sallow face,

Mussolini bore slight resemblance to the once imperious Duce. While at the Legnano Barracks he had managed to maintain a vestige of the old pomp and had perplexedly asked a *carabiniere* why the band no longer played "Giovinezza," the Fascist anthem. But to those with him at Gran Sasso, he seemed only a broken peasant, acknowledging his rueful destiny. His one hope was to be liberated by the Germans, and that now seemed impossible. In fact, although Mussolini did not know it, his guards had orders to gun him down at the first sign of a rescue.

He remained alive by grace of the King and the Badoglio government, but that hastily-put-together regime was toppling, too. On September 3, the Italians signed the surrender to the Allies, and five days later General Dwight Eisenhower announced the beginning of an armistice.

The same day 169,000 Allied troops landed at Salerno. The terms of the armistice were harsh, but Badoglio's announcement of Italy's acceptance went on the air. Among the clauses, No. 29 stated "Benito Mussolini will forthwith be apprehended and surrendered into the hands of the Allies."

Hearing a radio announcement of the armistice, Mussolini made a pathetic attempt to slash his left wrist with a razor blade. Then he quickly summoned a guard who treated the scratch with iodine.

The next day, in as sorry a

chapter as exists in Italian history, Badoglio, the King and a retinue of *aides* and diplomats fled from Rome. They were escaping the Germans, who in the wake of the armistice were putting Operation Alaric into effect. But in the confusion and chaos, as Nazi troops disarmed Italians and took over the defence of the country, the Allies still did not know where Mussolini was.

Skorzeny, however, was now sure he had found his elusive quarry. With the first indication that the Duce might be at Gran Sasso, he had put his agents to work immediately. He learned that many *carabinieri* were moving into billets around the village of Assergi, at the foot of the cable railway, and that checkpoints had been set up on all the roads.

Angry villagers complained that the staff at the hotel had been dismissed without notice. A German medical officer, ordered to inspect the hotel on the pretext of finding a convalescent home for malaria victims, was prohibited from boarding the cable railway and was threatened with arrest.

This information convinced Skorzeny and his team that Mussolini must be there. The question remained: how to reach him before he was spirited away?

A ground attack against the valley station was out. All too easily the *carabinieri* could immobilize the cable railway. Aerial reconnaissance

showed that a parachute drop was impossible. Strong air currents would swirl most of the parachutists into the fissures below Monte Corno.

That limited it to gliders, and even so, the experts forecast 80 per cent losses because of the fierce thermals which could heel a glider over like a suddenly tilted tray.

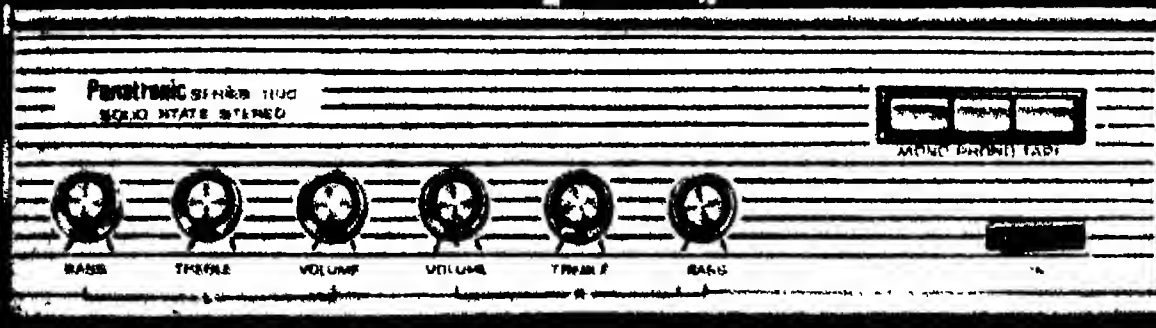
But the risk had to be taken. An order went out for the planes: 12 towing craft and 12 gliders. Each glider would carry ten armed men: paratroopers or Skorzeny's S.S. agents. Those in the first four craft would storm and occupy the hotel, but no one was to fire a shot unless alerted by a red flare. If the plan went awry, the remaining troops were to pin down the Italians with mortars and machine-guns.

One further item was required, a tiny Fieseler-Storch spotter plane. Apart from a helicopter, it was the only aircraft that could land in a confined space. If all went well, the pilot would have an important passenger on his return flight.

"Heil, Duce!"

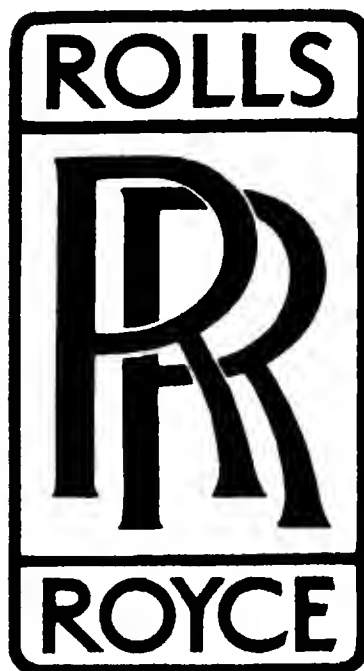
THE planes and gliders took off from an airport near Rome at 1 p.m. on September 12, and arrived in the vicinity of Monte Corno about an hour later. Skorzeny was in the lead glider. Ahead of him the plane let go its 15-metre tow wire and the glider lurched downwards.

The pilot checked the terrain nervously. The only photographs that



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had been available for briefings were some indistinct 13 cm. × 13 cm. prints.

In the left-hand corner the hotel had shown as a dark smudge with a white concrete terrace rimming its southern face. The rest appeared to be a lunar landscape, its contours flattened unnaturally. But a triangular patch to the west had suggested a meadow and this had been picked as the one likely landing spot.

Now the dark smudge was taking form—a squat U-shaped building. They were diagonally over it at 137 metres: tiny ant-men were spilling from its main doors. In that moment all the pilots saw the triangular “meadow” clearly. Their cherished landing field was actually the main ski-run!

As the ground raced to meet him—scrub, parched grass and boulders—Skorzeny’s pilot jerked the glider sharply upward, jolting the crew against their seats. In that instant the brake flaps went out, and the glider dropped, the barbed wire that wrapped its skids to shorten the sliding distance snapping like twine as the rocks bit into it. Swaying and shuddering, splintering like matchwood, the craft wrenched to a halt, barely 18 metres from the hotel’s terrace.

Inside the building, Inspector-General Giuseppe Gueli reached a swift decision. Although his orders concerning Mussolini were plain enough, Badoglio’s flight had made

everyone jumpy. With the Germans taking over, even police headquarters in Rome was counselling “extreme prudence.”

Stark naked in his third-floor room enjoying a siesta, Gueli leaped from his bed just as Lieutenant Alberto Faiola crashed in.

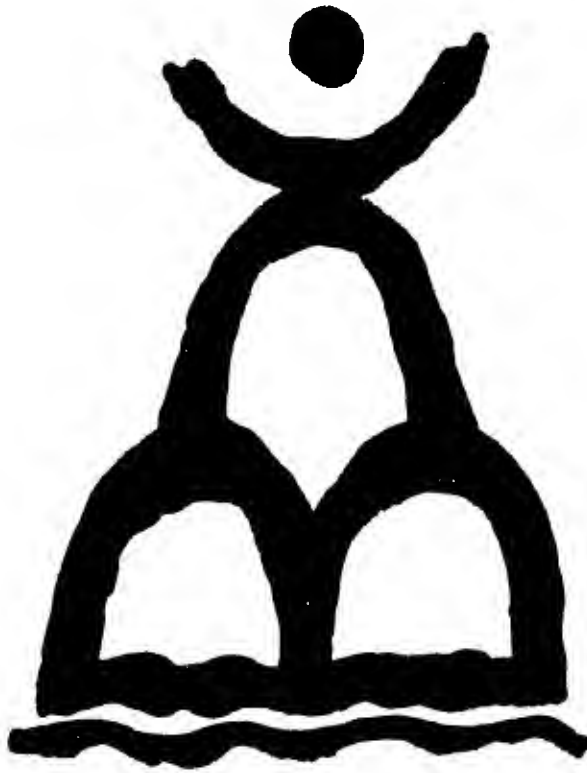
“What do we do?” Faiola asked, and Gueli ordered: “Give up without hesitation!” Both men hung frantically from the window, shouting, “Don’t shoot! Don’t shoot!”

At his own window, Mussolini’s bald head was plainly visible. Seeing an Italian general, whom Skorzeny had brought along to deceive the guards, the Duce called: “Do not shed blood!”

All over the plateau the gliders were smashing to a halt; boots clattered on the hotel’s steel-treaded stairs; guard-dogs yelped hysterically in the cellars.

Obersturmfuehrer Karl Menzel, heaving himself from his glider, was so stirred by the sound of battle and his first glimpse of Mussolini that he let loose with a stentorian “*Heil, Duce!*” Then a searing pain shot up his right leg. Toppling unwarily into a ditch, he had broken his ankle.

Skorzeny, followed by a tough non-commissioned officer, Otto Schwerdt, reached the main building. Through an open door they glimpsed a soldier hunched over a transmitter. One swipe from Schwerdt’s boot sent the stool flying from under him; the butt of



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had begun.*

Skorzeny's MP-38 machine-pistol, all its owner's weight behind it, smashed downward on the terminals. No warning could get to the outside world now.

Racing along the terrace, Skorzeny reached the main entrance. A surge of *carabinieri* in grey-green blocked his path, fighting to get out. Again he clubbed with his machine-pistol, beating his way against a tide of men. Schwerdt followed, shouting "*Mani in alto!*" (Hands up).

On the second floor, obeying instinct, Skorzeny flung open the door of Room 201. One quick glance took in the scene: a small hallway with a hatstand and wardrobe, a yellow-tiled bathroom, double bed, leather easy chair, a photo of Mussolini's son Bruno, killed in a plane crash in 1941. In the centre of the room, three men stared at him dumbly—two Italian officers, Gueli and Faiola, and Mussolini.

"Duce," Skorzeny announced, "the Fuehrer sent me. You are free!" Fervently Mussolini embraced and kissed him, exclaiming: "I knew my friend Adolf Hitler would not desert me."

Into the Ravine

SIMULTANEOUSLY with the hotel raid, paratroopers approached Assergi and seized the valley station. This made it possible for the Germans to travel down in the cable car, taking their Italian prisoners with them. But for a prize as great

as Benito Mussolini, a road journey through nearly 160 kilometres of unknown territory was too risky. The spotter plane offered the only way out.

As previously arranged, a second spotter had landed near the cable railway. But now the pilot radioed that he had damaged a wheel. That meant that there was only one small aircraft to take both the Duce and Skorzeny back to Rome; from there they would be flown in a Heinkel bomber to Vienna.

Skorzeny made a quick decision. He, too, must fly with the Duce. The pilot, Heinrich Gerlach, refused categorically. The spotter could barely manage with one passenger. How could it accommodate the pilot, passenger and the 93-kilogram Skorzeny?

"Suppose something happens on the way," Skorzeny argued, "and you're killed? If he's lost and I fail in my duty to the Fuehrer, I will have to put my pistol to my head."

Distraught with worry, Gerlach once more paced out the primitive 183-metre downhill runway which the soldiers had cleared for him by removing the larger boulders. Above him Monte Corno soared sheer to the autumn sky. No take-off was possible in that direction. Instead, he must taxi with the tricky north-east wind behind him directly towards the lip of a ravine. If he was lucky, he would be airborne by the time he reached it.

But with Skorzeny aboard, they

Language — Then & Now 2



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didn't stand a chance. Striding angrily back, Gerlach told him as much.

Still Skorzeny argued. Hitler would never forgive such an end to the venture. Whatever befell the Duce, he must share it.

He persisted for so long that finally Gerlach snapped: "Well, for God's sake, come—but if something happens on take-off, it's *my* responsibility."

Skorzeny clambered aboard and crouched behind the passenger seat. Clad in a shabby overcoat and soft dark hat, Mussolini followed. As the plane jerked forward, the paratroopers gave it the Roman salute, but their mingled cries of "*Evviva*"

and "*Heil*" were drowned by the roaring engines. At full power, the plane bounced down the slope.

Five yards from the ravine, Gerlach tried to bring the craft up, but failed. With a shattering jar, the right wheel struck a rock. The left wing canted downward—and the next instant the plane fell crookedly off the edge of the ravine, plummeting towards the valley like a lift out of control.

A sharp cry broke from Skorzeny. Mussolini said nothing. The determined Gerlach pushed the stick forward, increasing his rate of descent.

At the last moment, scarcely 30 metres above the valley, he pulled

the plane from the dive and, at maximum speed, swooped over the farms and vineyards below.

Mussolini seemed unaffected by the close call. To Skorzeny's astonishment, he began a non-stop commentary as if he were an excursion guide: "That's where I addressed a huge crowd 20 years ago . . ." he pointed out.

About 5.30 p.m. they touched down outside Rome, the oil feed leaking, a starboard strut crumpled beyond recognition.

Pumping Gerlach's hand, Mussolini said in German, a language he would now have urgent reasons to perfect: "Thank you for my life."

"Duce, You Are Too Kind"

MUSSOLINI reached Rastenburg on September 15 and was met at the airfield by Hitler. On the surface the reunion of the two ageing dictators was cordial.

As he climbed from the plane, tears streamed from Mussolini's eyes. "Fuehrer," he said, "how can I thank you for all you have done?" Hitler, too, seemed deeply moved, stepping impulsively forward to grasp Mussolini's hands.

But later in Hitler's private sitting-room, the mood changed. "What is this Fascism," Hitler asked, "that it melts like snow under the sun?" Wary and depressed, Mussolini listened in silence, hoping that it would soon end. He was in no shape to discuss the Italian situation.

Hitler, however, had already made his plans. Mussolini was to announce immediately that the monarchy was abolished and that an Italian Fascist State had taken its place with powers centred in the Duce. "In this way," the Fuehrer said, "you will guarantee the full validity of the German-Italian alliance."

Mussolini gestured feebly; he needed time to reflect. In vain—Hitler had made up his mind.

The Fuehrer also made further stipulations. The most important concerned the 28-man Italian Grand Council which, during a dramatic late-night session on July 24, had voted to oust Mussolini. Among the members was Count Galeazzo Ciano, the husband of Mussolini's daughter Edda. A wily politician, Ciano had risen rapidly to the post of Minister of Foreign Affairs and had done much to bring Mussolini under German influence. But at the Council's crucial meeting, he had denounced Hitler and the treacheries which had involved Italy in the disastrous war.

Now, Hitler insisted, the Grand Council—those who had not already fled the country—must be dealt with, above all, Ciano, "a traitor four times over." And Ciano had not escaped; the Germans were holding him in a villa outside Munich.

Mussolini protested vigorously. "This is the husband of my daughter, whom I adore," he argued,



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"this is the father of my grandchildren."

"Duce," Hitler replied implacably, "you are too kind. You can never be a dictator."

On that note, Hitler broke the talks short. But the two men met the following day. In harsh syllables, Hitler spelled out the fate that awaited northern Italy if Mussolini did not consent to re-establish a Fascist government.

He spoke of new weapons—"devilish arms," he called them—designed for the destruction of London. Clenching his right hand slowly into a fist, he all at once snapped his fingers wide, and said, "It is up to you to decide whether these weapons are to be used on London, or tried out first on Milan, Genoa or Turin. Northern Italy will envy the fate of Poland if you do not agree to honour the alliance. In such an event, Ciano will not be handed over to you—he will be hanged here in Germany." Never once, the Duce maintained, did Hitler allow him any other choice.

On September 18, Mussolini went on the air, calling for the men and women of Italy to reorganize under his faltering banner. And so came into being the puppet "Salo Republic," named after a town on Lake Garda, some 483 kilometres from Rome, near Mussolini's new headquarters.

But even Hitler was under no illusions any longer. In one cogent

sentence he summed up the stark reality overshadowing the 600 days that Mussolini had still to reign. "The Duce," he said to Josef Goebbels, "has no great political future."

A Bloody and Awful End

CIANO was returned to Italy in late October and held in Verona's sixteenth century jail. Five other members of the Grand Council were also located and imprisoned in near-by cells. On November 14, the Fascist Party Congress called unanimously for their deaths.

Edda Ciano, Mussolini's daughter, appealed to her father to release her husband. Feebly, Mussolini argued that he could not override the law to intervene for his son-in-law.

He himself had forgiven Ciano, but scores of others would neither forget nor forgive. Hitler, especially, was waiting to see if he had the strength to stand aloof from Ciano's fate.

Even the Duce's wife, Rachele, was opposed to clemency. "The Duce," she had shouted at Ciano before his imprisonment, "is not a piece of furniture to put in the attic when you're tired of it." From early November when she joined Mussolini at Lake Garda, she never ceased to urge that Ciano must stand trial. Mussolini did not argue with her. His was the tragic dilemma of a man so weak he dared not show compassion.

"If you were kneeling before me

dying of thirst," Edda bitterly upbraided him, "I'd take the last glass of water in the world and empty it in front of your eyes."

In years past Edda had been the impulsive, arrogant daughter of a dictator; now she was transformed into a frightened woman, desperately trying to save her husband's life.

She had one last card to play. For years Ciano had kept a secret diary, detailing the intrigue and treacheries which had taken place at the highest levels in Germany and Italy.

Such documents had great value to certain people, for they could be used to topple others from power.

A clandestine deal was made. Edda would deliver a portion of Ciano's papers in exchange for a jailbreak staged by German agents. Once confirmation came that Ciano had reached Turkey along a secret S.S. escape route, she would hand over the diary and remaining documents.

On the night of January 7, 1944, Edda made her way to a rendezvous point west of Verona. Strapped tightly beneath her bosom were eight volumes of Ciano's papers, stripped of their covers. But she waited in vain.

At the last moment Hitler had learnt of the plot, and telephoned General Wilhelm Harster, the German security chief in Verona. Harster was in on the plan, but

Hitler bellowed, "If Ciano escapes, you'll pay with your head."

The trial of Ciano and the five others present opened on January 8. One of the judges characterized the trial as "an act of revenge, not justice."

Thus, the results were almost pre-ordained. All were found guilty; one, on appeal, was sentenced to 30 years' imprisonment and five, Ciano included, were sentenced to death.

On the second day of deliberations, the back benches of the court, previously empty, had suddenly filled with Blackshirts. Pistols at the ready, they covered every entrance, every staircase.

"Don't take this badly," one said to a lawyer. "We've nothing against you. But if those over there are not found guilty, we're here to finish the job. Just remember to duck your head."

The five were executed on January 11 by a firing squad of 30 men, aiming 11 metres from their strapped and helpless targets. It was a bloody and awful end.

A few days later, Don Giuseppe Chiot, the white-haired chaplain of Verona jail, who had shared with the accused their last night on earth, paid a call on Mussolini in his study.

"How did this tragedy go?" asked Mussolini bluntly.

"As you wanted it to," the priest replied.

The Duce defended himself. "What do you mean, I? You ignore

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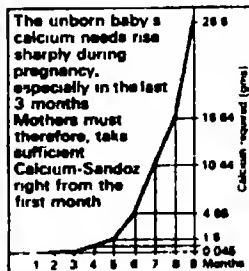
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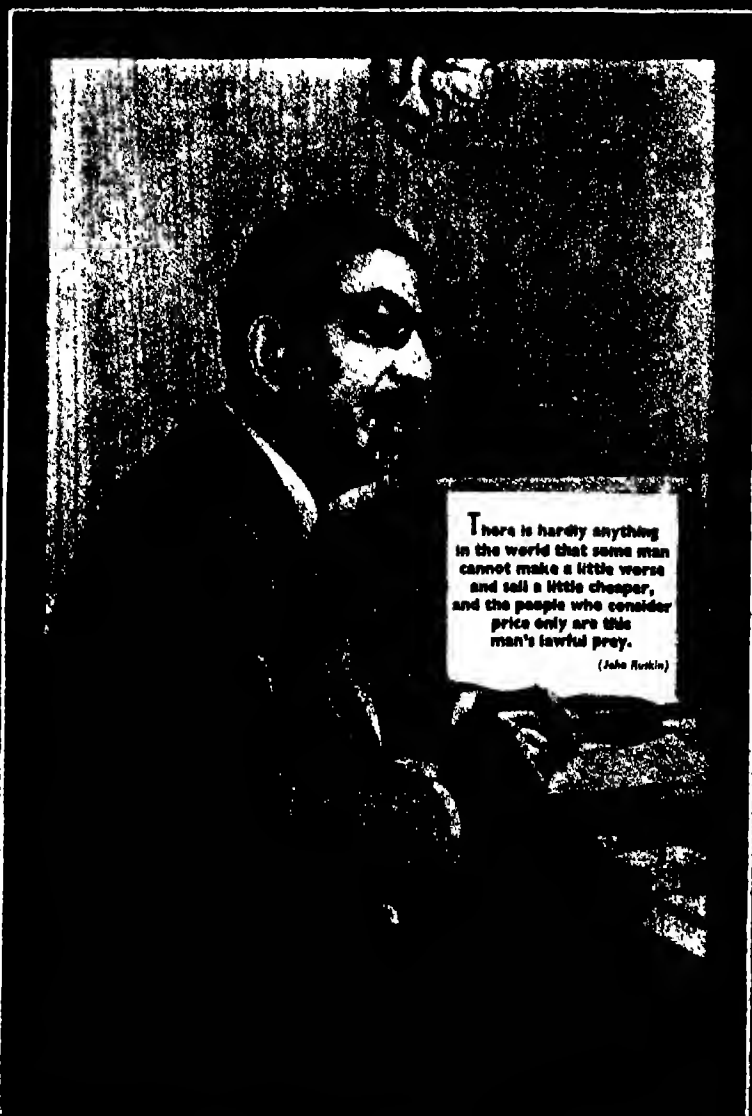


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the fact that there were judges at the trial."

The priest brushed the objection aside: "No one would have dared to sentence them without your consent."

Quietly, without fear, Don Chiot took the dictator to task. He had confused the betrayal of Fascism with the betrayal of Italy. "The Italian people separated the two things a long time ago," he said.

Mussolini's head was between his hands; he was no longer the Duce. "How did they pass the last night?" he beseeched, wetting his lips.

All of them, the priest recalled, had been very close to God. They had gathered in one cell to talk their last night away—Plato's dialogue on the Immortality of the Soul . . . the Last Supper . . . Christ in the Garden of Gethsemane.

Ciano had remained bitter almost to the last.

"I'll never give Hitler and Mussolini that satisfaction," he raged when each man was invited to sign an appeal for mercy. Only when it was pointed out that he would prejudice his comrades' chances did Ciano consent.

"You have got to know it all," Don Chiot insisted, "your son-in-law cursed you because you did not grant the pardon."

But one of the others urged him to be forgiving, placing his hands squarely on Ciano's shoulders and reminding him that

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they were all about to appear before God's tribunal.

"Yes," Ciano had said then, "we are all swept away by the same gale. Tell my family that I die without rancour against anyone."

Trembling, Mussolini interrupted: "He said, 'Tell my family'?"

"Yes," Don Chiot assured him, "that meant *you* too."

For one long moment Mussolini stared at the priest. Then the grief broke in him like a haemorrhage and he fell forward, weeping convulsively.

The thought jumped into Chiot's mind: The appeal for mercy was never sent. He never saw it, yet he won't admit it. He is afraid to show how the Germans have him in their power.

In fact, Mussolini had awaited the prisoners' petition all that night. It was kept from him by those who were determined there would be no pardon.

The Duce, wet-eyed, grasped the priest's hands, trying to smile. "They forgave me, isn't that so?" he begged. Then after a moment, he added, "Don't tell the others what you have seen here."

Chiot looked at Mussolini. "He seems a child," he thought, "just as the condemned men of Verona seemed during their last hours."

A Sinister Prophecy

MUSSOLINI, who had once admired Nazi power, now groaned beneath its weight. The Germans had not

only picked out his living quarters at Lake Garda but had detailed 30 S.S. men to guard him day and night. A network of checkpoints kept him sealed off from the world, his only access to the outside being through a German Army telephone exchange, on which all calls were monitored.

His army was in disarray. Three new divisions, after training in Germany, returned home lacking in equipment.

"They don't want my Republic to have an army!" Mussolini complained. Adding to his problems, in September 1943, the people of Naples had openly rebelled to throw off Nazi control. Thousands, many of them communists and socialists, took to the mountains, the first of a partisan force which would soon number 200,000 resistance fighters.

In the past his home had always provided Mussolini with an island of quiet amid his troubles. Even when living in a Roman villa, Rachele had managed the place like a Romagna farmhouse, feeding her chickens in the back yard. But now the tranquillity of his home life had been shattered by Rachele's discovery that Claretta Petacci was also living at Lake Garda.

For more than seven years Claretta had been Mussolini's mistress. Daughter of a senior Vatican doctor, she had worshipped the Duce all her life, even sleeping with his picture beneath her pillow. She

had memorized his speeches, sent him poems and was disappointed when he did not respond to her invitation to her fourteenth birthday party.

They had met for the first time in 1933 when she was 21. Over the next several months she was summoned to the Palazzo Venezia, Mussolini's Rome headquarters, perhaps a dozen times for brief talks.

At that time the relationship was platonic. In 1934 Claretta married a young lieutenant, but within two years she had applied for a separation. Thereafter, her daily presence at the Palazzo Venezia was common gossip in every Roman salon.

Only Rachele remained unaware, and she did not learn the truth until Mussolini was deposed. She had always known there were other women in the Duce's life, casual, short-lived affairs; a liaison lasting seven years was something else.

Now, in October 1944, outraged that her rival had dared to take up residence at the lake, she decided on a showdown. Formidable in a checked suit, she approached Claretta's villa, accompanied by the Minister of Home Affairs, Guido Buffarini-Guidi, and a truckload of 50 policemen.

She was met outside the high iron gates by Obersturmfuehrer Franz Spogler, Claretta's bodyguard. Spogler insisted that Rachele

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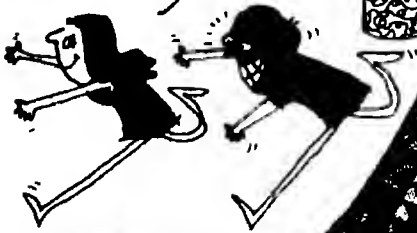
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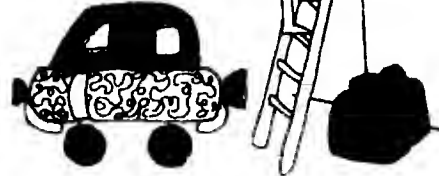
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stay outside the gates, then raced to a phone and notified Mussolini.

Hastily he outlined the situation, hearing the Duce's gasp at the other end of the wire. But then Mussolini said grandly, "I have nothing against a meeting of the two. But if one of them raises her voice, you will put an end to it."

Back at the villa, Spoegler found the enraged Rachele trying to scale the three-metre-high gate, while Buffarini tugged frantically at her skirt, imploring, "Excellency, come down."

Spoegler admitted her to the house. Meanwhile, Mussolini had phoned Claretta, persuading her to agree to the meeting. Claretta dressed herself to kill—an eye-catching dress, a silver fox fur stole and jewels. As he offered his arm to escort her downstairs, Spoegler thought uneasily: "That's just a shade provocative."

Nor was he wrong. Rachele set the keynote: "This is how a woman dresses when she's kept by the head of a nation—and look at me, I'm married to him."

At the suggestion that she was a "kept woman," Claretta reacted violently. "She's mad, dangerous!" she shouted. "Get her out of here," then fainted dead away.

Rachele, unimpressed, commented: "I know these faints—I know them! Nobody dies for so little."

Claretta recovered, and doggedly, Rachele returned to the attack. For her sake and for the sake of Italy,

she demanded that Claretta put an end to the relationship. The younger woman fought back: the Duce needed her, she was his spiritual support. His letters proved it!

"Show me!" challenged Rachele.

Claretta went to the phone and called Mussolini. She asked permission to read Rachele some extracts from his letters. "Is it really necessary?" stammered the sweating Duce. "Indispensable," Claretta told him.

In the villa's Red Room, Rachele waited, eaten by worry. All morning she had felt a strange unease. Disaster seemed to be threatening. Ever since August, when the Germans had executed 15 partisans in Milan's Piazzale Loreto, there had been a wave of threatening any-

mous letters. Overnight, the tiny square had become a symbol of partisan vengeance. Only that morning, Rachele had received one such missive which troubled her profoundly. It read: "We'll take *you* to Piazzale Loreto."

Now, when Claretta reappeared with the hated letters bound up in pink ribbon, it was the last straw. Every phrase the girl read—"I need your words," "Today I missed you"—stung like acid. Rachele edged nearer, then tore the papers from Claretta's grasp. Spoegler leapt in. Incensed, Rachele drew her nails down his left hand as they grappled, a wound so deep that the scar still survives.

In the confusion Claretta again

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rang Mussolini, who called for the German. "This is terrible, Spoegler, stop them, stop them!" came his anguished tones.

To the German the whole affair now hovered uneasily between tragedy and farce. But at length Rachele saw that it was useless. Spoegler was bleeding badly, but he had regained the letters and had no intention of giving them up. Bitterly, after more than two hours, the Duce's wife acknowledged defeat.

Then, still tormented by the anonymous message of that morning, she once more lost control. Storming through the front door, outraged and frustrated, scarcely knowing what she said, she shouted prophetically: "You'll end badly, Signora! They'll take you to Piazzale Loreto!"

The Dying Gasp

BEDEVILLED by personal problems, shackled by the Germans, Mussolini still fed his ego with dreams of recaptured glory.

As early as June 4, 1944, the first Allied armoured cars had nosed into Rome and defeat was a foregone conclusion. Yet six months later, in December, the Duce was travelling to Milan, speaking defiantly of new weapons he had seen in Germany, which could bring about an ultimate Axis victory.

Before an audience in Milan's 2,000-seat Teatro Lirico, he gave a bravura display of oratory,

relayed by loud-speakers all over the city.

As he left the theatre after the speech, women broke ranks to thrust bouquets on him, tearing off his epaulettes, imprinting his hands with lipstick marks. The next day, in a triumphal procession through the city, 40,000 people turned out to cheer hysterically.

It was the dying gasp of Fascism. Already plans were being advanced for a heroic final battle in a mountain bastion, the chosen redoubt being the 70-kilometre-long Valtellina, north of Milan.

Fortifications from the First World War still ringed the valley. There were electric generating stations, and hospitals—and direct access to Germany or Switzerland over mountain passes. The plan, which promised an Italian last stand free of the German yoke, appealed to the Duce. "I like this programme very much," he told his *aides*. To go down in glory in Valtellina would preserve his legend for all time.

Claretta Petacci had other ideas. Through her bodyguard Spoegler, she had learnt of a hide-out 2,000 metres up in the mountains where she and the Duce could go. Twice Spoegler had taken Claretta there by sled.

They had talked to an old couple who occupied a hut deep in the pine forest. Claretta explained to them that although two people might live there for years, no



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questions must be asked. Once they had agreed, she then persuaded Spoegler to broach the subject to Mussolini.

To her heartfelt relief the Duce did not explode. Instead he listened attentively, saying, "I see, I see." Claretta had worked out every detail of the escape route. Some of the journey would be rough, undertaken at night, and on foot, but Spoegler was faking transit permits so that German road-blocks would not delay them.

Events were moving swiftly, however, Mussolini was counting on the Germans to hold the line at the Po, south of Milan, but, in fact, certain German high commanders had secretly opened negotiations to surrender.

On April 21, the Allies took Bologna and pushed north-west. Two days later an *aide* sent by Mussolini to prospect the front, returned dusty, sweat-stained, to tell the stark truth. "It's disastrous," he choked out, "there's nothing left."

"But the Germans are defending the Po," Mussolini insisted.

"The Germans are defending nothing, Duce," his *aide* retorted. They had one plane left, he said, and no artillery. "You should order an immediate retreat to Valtellina—the German command doesn't exist any more."

"They say they're throwing flowers to the Allies in Bologna," Mussolini said. "That can't be true?"

The *aide* replied, "Unfortunately

it is. The people are ready to greet anyone who brings tranquility."

"The Last Page in My Book"

To THE very end Mussolini sat squarely on the fence, unable to reach a decision. At one moment he inclined towards the Valtellina plan—then he wavered. The area teemed with communist partisans, his advisers pointed out, and they had threatened to blow up the generating stations if the Fascists moved in. "It is absurd to think of resistance in Valtellina," one man said. "Bologna has fallen! What lies ahead is a military rout!"

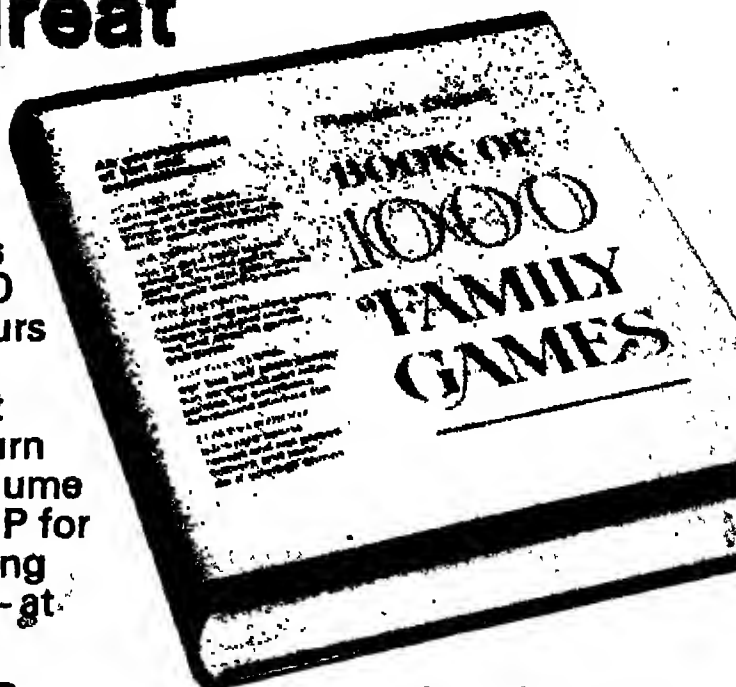
Meanwhile, Claretta was still intent on her own scheme, although fearful that the Valtellina idea would prevail.

"We'll just have to pack him into a car and take him," she said despairingly, knowing she could never do it. By April 24, she had grown apprehensive that Mussolini might leave suddenly, without warning, for the valley redoubt. She *had* to be with him. Calling a Fascist friend, she asked for a grey-green uniform of the Women's Auxiliary Force. Wearing it, perhaps she could follow the Duce. "Please," she urged, "I'm going to die with him."

As a last resort Mussolini even attempted to treat with the partisans. An understanding might avoid an uprising in Milan, partisan against Fascist, which could only

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bring terrible suffering to everyone. Even now the streets wore a sullen air, and many shops had pulled down their shutters.

Outside most public buildings, the guards had blatantly discarded their uniforms, donning civilian suits.

But the partisans demanded unconditional surrender. Mussolini balked at that, and the meeting, held in Milan on April 25, came to nothing. The Duce returned to his headquarters, his *aides* following in confusion.

To one ardent follower, there seemed no solution left but to seize Mussolini and take him to Valtellina by force, so that Fascism "could die in beauty." But again the Duce underwent a mercurial change of mind. All would head for Lake Como, 48 kilometres north.

The move was made in a caravan of 30 cars and trucks. But at Como the Duce's indecision continued. At one point he was determined to head for the Brenner Pass at all speed to join Hitler. At another he veered towards seeking sanctuary in Switzerland.

Finally, amid reports of the fall of Milan and of partisan sorties in the mountains near by, Mussolini penned a farewell letter to Rachele: "I have come to the last chapter in my life, the last page in my book. I ask your forgiveness for all the harm I have unwittingly done you. But you know you are the only woman I have ever truly loved."

Claretta, true to her stated intention, had followed Mussolini from Milan and remained with him now, as did the old Fascist Party chiefs. But everyone else had deserted him. The men assembled for the last-ditch stand at Valtellina slipped away.

Their faith shaken in Mussolini, fearful of the partisans in the mountains, hundreds were even donning the red neckerchiefs of the Resistance. When Mussolini asked how many men would accompany him, the sad answer came: "Twelve." The Valtellina dream was shown for what it was—a Fascist fantasy, as bombastic and empty of meaning as one of the Duce's speeches.

His decision, at last, was made. "We leave at 5 a.m. Let's hope we can reach the German Embassy at Merano before nightfall."

The Duce in Disguise

THEY LEFT in a joint German-Italian convoy of 40 vehicles, led by an armoured car with a 20-mm machine-gun in its turret. Behind it came Mussolini, driving his own Alfa Romeo. (Later he transferred to the armoured car.) The party included 200 retreating Luftwaffe anti-aircraft personnel.

The armoured car snaked its way along the lakeside road on the western bank of Como, but nine kilometres north of Menaggio, a three-edged nail placed in the road by partisans pierced the right rear tyre,

and the vehicle, now carrying Mussolini, was forced to halt. Three Germans clambered out. It was raining lightly.

Some 46 metres ahead they saw a barricade of chestnut trunks and rocks. To the left, the rocky bank rose sheer to the mountains, to the right, it dropped steeply to the lake. It was a perfect spot for an ambush.

Above the low stone wall that flanked the lakeside, a white handkerchief fluttered, and a three-man delegation of partisans approached the convoy.

Their leader was Pier Luigi Bellini, a lean, black-bearded Florentine who commanded the mountain-based 52nd Garibaldi Brigade. The partisans were undermanned and under-armed, so they had to rely entirely on bluff.

Lieutenant Hans Fallmeyer, who knew Italian, spoke for the Germans. The column was en route to Merano, he explained, and had no wish to pick a quarrel with the Italians. Bellini shook his head. His orders were to let no man through. "You are covered by mortars and machine-guns," he warned. "I could wipe you out in 15 minutes."

How many Italians did he have with him? Bellini asked. Impassively, Fallmeyer wrote off Mussolini and his ministers.

"A few civilians, who are no concern of mine. My concern is only with my men."

To allow Fallmeyer through,

Bellini explained, he must have clearance from his division. If the German would accompany him and state his case he might get leave to proceed. There was an argument in the drizzling rain, but Fallmeyer finally agreed.

With that Bellini raced to one of his men. A dispatch rider must go ahead, warning every checkpoint to have all available soldiers out on the road.

"Send the others into the hills," he instructed, "but see that they keep in sight and make them wear something red. Whatever happens, the Germans *must* think they're armed."

The ruse worked brilliantly. All the way to divisional headquarters 30 kilometres north—a trip that took an hour and a half—Fallmeyer's binoculars picked out red neckerchiefs and armed men crouching among the rocks. Convinced he faced a superior force, he accepted Bellini's order to dissociate his own troops from the Fascists. When he returned to the road-block he informed the others that the Italians in the column would have to stay put. But if the Germans moved on to the town of Dongo and submitted to a search, they could proceed towards Germany.

"We can't advance and we can't turn back," Fallmeyer urged. "They've blown the bridges behind us."

Mussolini, however, would accompany them, disguised as a



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Pier Luigi Belloni—his bluff netted the Duce

German soldier. "But when I meet the Fuehrer and tell him I've been forced to use this trick," the Duce expostulated, "I shall feel ashamed."

"This is the one hope you've got of passing the road-block," he was told.

Grumbling, he said he would "think about it."

"Duce, there is no time to think," his S.S. bodyguard bellowed. "Make up your mind now because we're leaving!" Fuming, Mussolini entered the armoured car and slammed the door shut; a German soldier wrenched it open, and flung in a sergeant's topcoat and a helmet.

Minutes later Mussolini emerged, his helmet back to front, the overcoat so long it brushed his feet.

Patiently his guards set the helmet right and fitted him out with dark glasses and an MP-38 machine-pistol. But now Mussolini began to protest that his ministers must come too. That was impossible. "Then at least my friend," the Duce pleaded, pointing to Claretta, in tears on the running-board.

"That, too, is impossible, Duce. You must go it alone." Tamely, screened from view by the Germans, Mussolini clambered aboard the convoy's third truck, and the vehicles moved off.

At three o'clock the vanguard of the convoy groaned on to the wharf of Dongo harbour, where a detachment of partisans waited, ready to conduct the agreed-upon search. Their leader, Urbano "Bill" Lazaro, was going through German documents in the second truck when suddenly he heard someone shouting his name from further down the convoy.

Dropping from the truck, he saw Giuseppe Negri racing towards him. A one-time naval gunner on a ship that Mussolini had sailed on, Negri had seen the Duce face to face—and never forgotten.

"Bill," he whispered frantically, "we've got the Big Bastard!"

Claretta's Plea

MUSSOLINI did not resist arrest. "I shall not do anything," he said in a trance-like voice, as he descended from the truck. He was taken to the Dongo Town Hall and

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sat there like a man in shock, asking for nothing more than a glass of water.

Bellini, the partisan commander, had no intention of harming him or letting him be harmed, but he feared a Fascist counter coup. Nor did he trust the trigger-happy newcomers who were hourly swelling the partisan ranks, many of them lured by rumours of the Salò Republic's reserve funds that had travelled with the convoy—several thousand million lire in gold bars and foreign currency.

At 7 p.m. Bellini personally transferred the Duce to a cell in the Finance Guards' Barracks at Germasino, six kilometres from Dongo, 600 metres up in the fog-shrouded mountains.

Once there, Mussolini sheepishly begged the partisan to send his regards to "the lady held in the Town Hall" (where the Italians in the convoy were being detained), revealing her as Signora Petacci. Returning to Dongo, Bellini recognized her for the first time—this notorious kept woman, whom he despised as much as all the other prisoners he had taken.

Yet Claretta's initial reaction puzzled him. For a self-seeking courtesan, her only worry seemed to be the Duce, and a torrent of distraught words poured from her.

"How long will he be in your hands?" she kept pressing him. Bellini didn't know. A local *cara-binieri* sergeant had telephoned

word of Mussolini's capture to Milan, but he was still awaiting instructions.

"You ought to turn him over to the Allies," Claretta objected.

"On the contrary," he told her, "I shall do what I can to see that he doesn't fall into their hands."

In a sudden spasm of grief Claretta reached out to him. "How can I make you believe that I was with him all those years simply because I loved him?" she cried, as if divining his scornful thoughts. "The only time I lived was when I was with him; you must believe me!" Hunched up on her chair, she buried her tear-stained face in her hands.

Bellini moved towards her. The sight of a woman crying distressed him profoundly. He begged her not to look on him as an enemy; he would do all he could to see she suffered as little as possible.

"I would never have thought that an enemy could be so kind and good," Claretta replied tearfully. "It encourages me to ask you a great favour."

Bellini drew up a chair to face her, lighting a cigarette. But though he listened attentively, the woman took her time. Speaking in a low monotonous voice, she rambled on about the years with Mussolini and their first meeting. It went on for a long time, then Bellini asked: "Tell me what it is, and I promise I will do anything I can to help."

Claretta leaned forward, grasping



Walter Audisio, Mussolini's communist executioner

his hand. "Put me with him!" she begged. "Let us be together. What harm is there in it?"

Bellini, withdrawing his fingers, gently demurred. If anything happened to Mussolini she, too, might be in danger. At once Claretta accused him: "I realize now you're going to shoot him!" Bellini denied it hotly: "Nothing of the sort!"

Then, to his astonishment, Claretta uncovered her face, slowly drying her eyes with her fingers. "Promise me," she asked, "that if Mussolini is shot, I can be near him until the last, and that I shall be shot with him. My life will be nothing once he is dead. That is all I am asking: to die with him."

Rarely had the young partisan felt

so moved. So this is what a woman's love can mean, he thought, and felt ashamed for having despised her.

"I will think it over and discuss it with my friends," he said, and it was all he could do to keep his voice steady.

A Peaceful Backwater

Two opposing forces were now trying desperately to locate Mussolini. The communists in the Partisan High Command wanted him dead. The Allies wanted him alive. It depended on who got to him first.

An American officer, Captain Emilio Daddario, crossed the Swiss border on April 27 with a team of 12 Italian agents, intent on finding the Duce.

But everywhere they went they ran into wild confusion—fighting between Germans and partisans—and gathered little information of the Duce's whereabouts. By the time Daddario reached Milan, Mussolini had long since left, and as the first American into the besieged metropolis, Daddario initially had to divert his efforts to staving off a massacre, as the city was still a network of German strongpoints.

Meanwhile, thanks to Bellini, the partisans knew where Mussolini was and had appointed his executioner.

He was 36-year-old Walter Audisio, known also as "Colonel Valerio," a partisan veteran and a victim of one of Mussolini's repressive

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By a ruse, Audisio obtained a pass, signed by Daddario himself, allowing him "to circulate freely with his armed escort" in Como and the vicinity. On April 28, he headed north with Aldo Lampredi, one of the most implacable communist resisters, and a truckload of men.

In Dongo, Bellini received Audisio suspiciously. He did not know him, and Audisio's harsh, peremptory manner convinced him he was a Fascist, not a partisan. But the pass worked. One glance at Daddario's signature and Bellini conceded that—like it or not—Audisio was in command.

"We're going to shoot every bigwig," Audisio said brusquely, "those are my orders: shoot the lot of them."

Bellini was dumbfounded. To shoot men without trial was as bad as anything the Fascists ever did. Overruling him, Audisio shouted violently for a roll of prisoners. Then, oblivious to Bellini's stammered protests, he began to mark it with black crosses. Benito Mussolini—death. Claretta Petacci—death.

"You'll shoot a woman?" Bellini burst out, appalled.

Audisio was indifferent. "She's been behind his politics all these years," he stated flatly.

"She was nothing but his mistress," Bellini snapped, "to condemn her for that . . ."

"I don't condemn anyone," said

Audisio, "the judgements have been pronounced by others."

The night before, worried that too many knew where the Duce was being held, Bellini had again shifted Mussolini, this time to quarters in a farmhouse in the foothills hamlet of Giulino di Mezzegra.

And he had granted Claretta's request allowing her to join him. Their room was a cold little peasant chamber, as poor as that in which Mussolini had been born nearly 62 years earlier.

Uneasy at Audisio's haste, Bellini groped for a compromise. It would be best, he suggested, if Audisio stayed put while he, Bellini, fetched Mussolini's ministers and the other prisoners from Germasino. At the same time he would dispatch two of his men, Michele Moretti and Luigi Canali, to fetch Mussolini and Claretta. All the captives would be delivered to Audasio at Dongo.

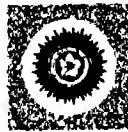
But as Bellini started for Germasino, one item escaped him. Moretti was his companion in arms, but he was also a fanatic communist.

Thus when Bellini's men set out in Moretti's Fiat to get Mussolini, in the back seat behind them sat Aldo Lampredi and Audisio, muttering, "Get on with it, get on with it."

At about four that afternoon, they reached the farmhouse where Mussolini and Claretta had spent the night. Audisio greeted the Duce: "I've come to liberate you." Mussolini, with heavy sarcasm, replied,

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"Really! Most kind of you." Audisio told them to gather their things, then led them to the Fiat. Claretta sat in the back seat, holding tight to Mussolini's hand.

Both of them, as the driver later recounted, seemed "strangely tranquil." Coasting downhill, the car moved as decorously as a hearse; Lampredi and Moretti sat on the running-board; Audisio crouched on the right front bumper, facing backwards, his machine-gun pointing into the car.

Several hundred metres along the road there was a hairpin turn. Beyond it Audisio ordered a halt near the high iron gateway of Villa Belmonte—with its cobbled entrance and stone walls topped by clipped privet hedges. It was a peaceful backwater, screened from the village by the sharp turn. Audisio vaulted from the bumper and ordered Mussolini and Claretta out. Keeping them covered, he motioned them towards the villa's gate. The others stood on guard, blocking anyone who might be coming from either direction.

"By order of the General Headquarters of the Corps of Volunteers for Liberty, I am charged to do justice in the name of the Italian People," Audisio said, but his words were drowned by Claretta's sudden scream, as she realized that this was truly the end.

"No! No! You mustn't do it, you mustn't," she cried out.

"Get out of the way if you don't

want to die too!" Audisio rasped back at her. With sweat pouring down his face, he squeezed three times on the trigger of the machine-gun. The gun had jammed. He tore his pistol from its holster; the trigger clicked dryly, but that was all. He screamed to Moretti: "Give me your gun!" Moretti raced up and handed him another weapon.


Sick to his stomach, the driver of the Fiat saw Mussolini unbutton his grey-green jacket. "Shoot me in the chest," he told the communist distinctly. Claretta tried to seize the gun barrel. Then, at three paces, Audisio fired two bursts—one of five shots, one of four. The two victims fell, but, with five bullets in him, the dictator still lived. Audisio gave him a final shot straight to the heart.

"The Beast Is Dead"

THEY brought the bodies back to Milan in a truck, along with the corpses of 15 other Fascist notables and dumped them under cover of darkness in the Piazzale Loreto—the grim deed the communists had planned all along in retribution for the 15 patriots executed there by the Germans in August 1944.

The next day the crowds were at first no more than curious, as they circled the bodies sprawled on the pavement.

Someone had placed a flagstaff as if it were a sceptre in Mussolini's hand and his head lay propped



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on Claretta's white blouse. News-men stood by, registering quick clinical impressions. Some photographers tilted the Duce's face towards the sun, supporting his jaw with a rifle butt.

James Roper, of the United Press, trying to get things into perspective, sought enlightenment from a partisan.

If Mussolini was Italy's most hated son, why put him together with his mistress for one last night? The man spread his hands wide, "We're all Italians, after all."

Then, abruptly, a jungle savagery set in. A man darted up and aimed a kick at Mussolini's head.

People began to dance and caper around the corpses. One woman fired five shots into Mussolini's prostrate form—one for each of the sons she had lost in the Duce's war.

Another ripped off his shirt, lit it and tried to thrust it in his face. Women moved in to commit the supreme indignity—spreading their skirts, they urinated on his upturned face.

A partisan chief ordered ten men to fire into the air, striving to keep the crowd at bay, but it was hopeless. Cursing, the people trampled the corpses, blind with the hatred of years.

Even 300 *carabinieri* could not restrain them; hastily they retreated, their uniforms ripped to pieces. The Fire Brigade struggled to the scene, but their powerful jets

of water could not extinguish the hatred.

Finally, one by one, the bodies were hoisted by their feet, to the girders of a bombed-out petrol station and left to hang. Claretta was next to Mussolini, her skirt lashed into place by a partisan's belt. "Imagine," a woman murmured, staring up at her, "all that and not even a run in her stocking."

The bells of Milan were pealing: the doleful cadence of San Babila, the solemn tolling of San Ambrogio.

The Duce is dead, was their burden, victory is ours, freedom. They carried the news through Milan and all Italy; they carried it to the world.

Adolf Hitler heard the fate of his old ally that afternoon in the Fuehrerbunker in Berlin soon after he had married his mistress, Eva Braun.

Those around him felt that he did not really take it in. The Russian tanks were only half a kilometre away, and he had learnt that his trusted Heinrich Himmler was negotiating with the Western Allies. That night he said good-bye to everyone in the bunker, preparing for his own macabre end.

Winston Churchill was at Chequers when the news reached him. Elated at the fall of the tyrant, he rushed in to his dinner guests, crying, "The bloody beast is dead." But when he read of Claretta, he at

once ordered an inquiry into this "cowardly action."

General Dwight Eisenhower received the report at Reims, Supreme Headquarters of the Allied Expeditionary Forces. To his chief-of-staff he burst out:

"God, what an ignoble end!" General Mark Clark, at his own headquarters in Florence, felt much the same way, but he still reflected that perhaps it had been for the best: "Even his own people had at last come to hate him."

Rachele Mussolini had been apprehended, too, and taken to the women's wing of the prison at Como.

She had been separated from her two youngest children, and it was this, above all, that troubled her. In the chaos, only one woman had recognized her and Rachele had begged her to be silent.

Outside in the prison courtyard a voice was intoning a list of names; there was a stutter of machine-gun fire, then the rumble of cart wheels. The Fascist Revolution was ending as it had begun, in blood. The women around her screamed and clung to the iron window bars, but Rachele was calm, wondering only when she would be reunited with her children.

She had learnt of Benito's death, but she had reached a point where grief could no longer help. Only tomorrow would she recall her strange prophecy to Claretta: "at all."

"They'll take you to Piazzale Loreto."

Close at hand a woman noted her uncanny calm. "And you," she asked Rachele, "you're not crying? You haven't lost anyone, then?"

At 2 p.m. that day Colonel Charles Poletti of the U.S. Army made his first post-liberation contact with the Partisan Command. No sooner had he exchanged greetings with Ferruccio Parri of the Action Party than the Italian burst out with the subject uppermost in his mind. He couldn't keep silent—not over Claretta, nor a display like "a butcher's shop." "It's ugly and unfitting," Parri said. "It will injure the partisan movement for years to come."

"It's done now," Poletti tried to console him. "Emotions run pretty high in war. But I did come to counsel you to take those bodies down and to stop stringing others up. Those are my orders."

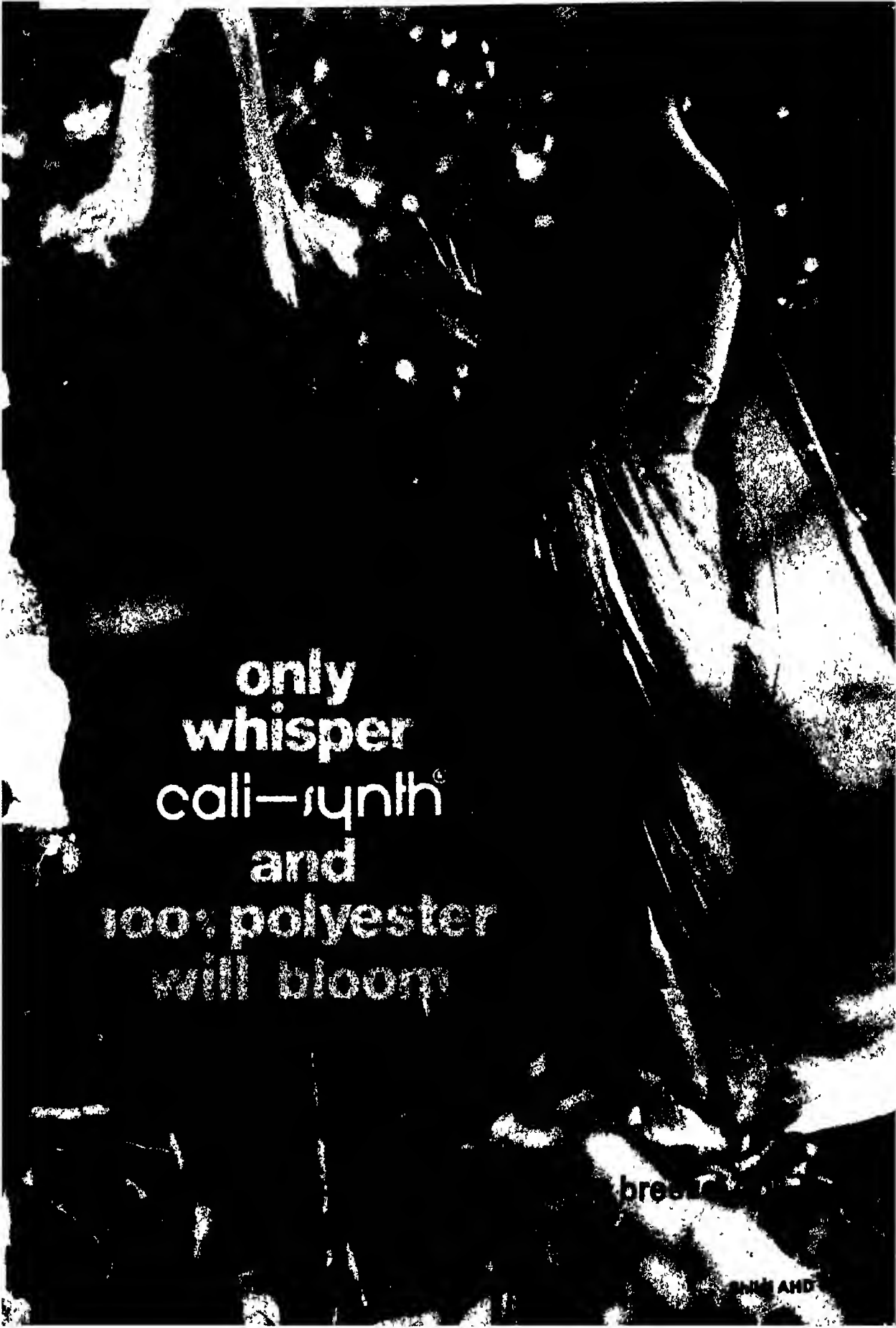
Parri agreed. "Very well—but where shall we take Mussolini? The mob may tear him to pieces."

Poletti considered. "In America," he said, "we have something called a morgue. Don't you have a morgue?"

"We have a poor man's morgue."

"Then, fine," Poletti decided. "Take him there. Have him guarded by the partisans and let nothing more happen to him, because it's over now. Let no more harm come to that man—no more harm

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Today's Science— Tomorrow's Solution

By ISAAC ASIMOV

What use is moon rock? A noted
writer gives his answer

IN THE 1840s, Michael Faraday, in one of his enormously popular science lectures, illustrated a peculiar phenomenon. He thrust a magnet into the hollow centre of a spiral coil of wire connected to a galvanometer that would record the presence of an electric current.

There was no current in the wire to begin with, but as the magnet was inserted, the galvanometer's needle moved to one side of the scale, showing that an electric current was flowing. As the magnet was withdrawn, the needle swung in the

other direction, showing that the current was now flowing the other way. When the magnet was held motionless within the coil, no current flowed at all.

After the lecture, a member of the audience approached Faraday and asked, "But of what practical use can this be?"

Faraday replied, "Sir, of what use is a newborn baby?"

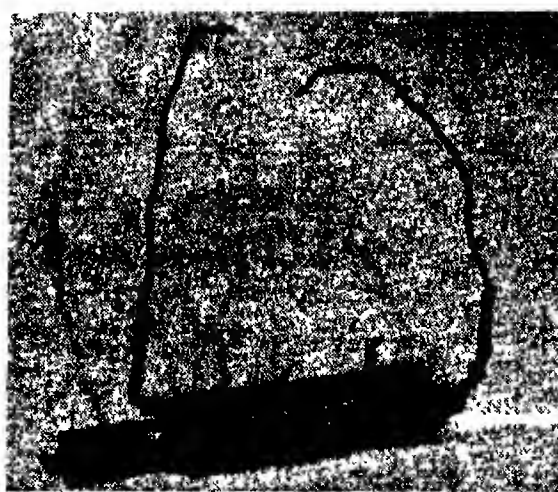
It was precisely this phenomenon that Faraday made use of to develop the electric generator, which, for the first time, made it possible to produce electricity cheaply and in

quantity. Faraday's newborn baby grew into a giant.

Even the shrewdest of men cannot always judge what is useful and what is not. Thomas Edison was surely one of the greatest inventors who ever lived. In 1868 he patented his first invention, a mechanical device that would record and total votes at the push of a button. A US Congressman whom Edison consulted, however, told him there wasn't a chance of its being accepted. A slow vote, it seemed, was sometimes a political necessity, since opinions might change as a count was being taken.

Discouraged, Edison decided never again to invent anything unless he was sure it would be needed. (Ironically, numerous legislatures now use vote-recording machines.) Before he died, he had obtained nearly 1,300 patents—including one for the first practical electric light, perhaps the most useful of all his inventions.

Over the years, Edison laboured to improve the electric light, mainly by making the glowing filament last longer before breaking. One of his hit-or-miss efforts was to seal a metal



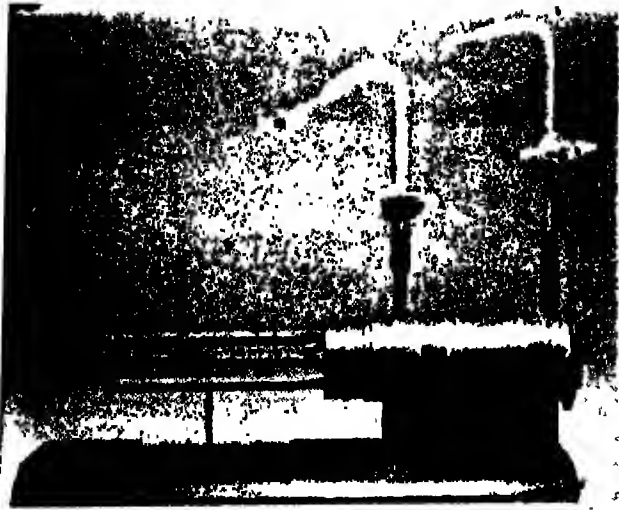
Faraday's "useless" magnet and coil, precursor of all modern electrified technology

wire into an evacuated light bulb, near the filament but not touching it. Edison then turned on the current to see if the metal wire might preserve the life of the filament.

It didn't, but he could not help noticing that an electric current seemed to flow from the filament to the wire across that vacuum gap. Nothing in Edison's knowledge explained the phenomenon. He wrote it up in his notebooks and, in 1884, patented it. The phenomenon, called the "Edison effect," was his only discovery in pure science. Since he could see no use for it, he pursued the matter no further.

Later, however, pure scientists discovered that electric current was accompanied by a flow of subatomic particles (eventually called "electrons"). The Edison effect was the result of the ability of these electrons, under certain conditions, to travel through a vacuum. In 1906, inventor Lee De Forest made use

With his *Foundation* trilogy and *I Robot*, ISAAC ASIMOV is among the world's best-selling science fiction writers. His prolific output of more than 100 works also covers medicine, science, history and mathematics. Born in Russia in 1920, he was taken to America by his parents at the age of three. Since 1955 he has been Associate Professor of Biochemistry at the Boston University School of Medicine.



Rutherford's atom-splitting device, eventual bringer of both terror and benefit

of this new understanding when he devised an evacuated glass bulb with a filament, a wire and a metal plate that enabled it to amplify an electric current. The result is called a radio tube. It made possible all our modern electronic equipment—including radio and television.

The Edison effect, then, turned out to have more astonishing results than any of his practical devices. In fact, it is difficult to find a branch of science that *isn't* useful. Between 1900 and 1930, for instance, theoretical physics underwent a revolution. The theory of relativity and the development of quantum mechanics led to a new understanding of the basic laws of the universe and of the behaviour of the inner components of the atom.

None of it seemed to have the slightest use for mankind, and the brilliant young scientists involved had apparently found an ivory tower for themselves. But out of



When Anton van Leeuwenhoek 300 years ago clamped a lens between two plates to form a microscope, no one foresaw its potential

that abstract work came the nuclear bomb, and a world that mankind could destroy in a day.

However, it did not bring only terror. Out of that research also came radio-isotopes, which have made it possible to probe the workings of living tissue with a delicacy otherwise quite impossible, and whose findings have revolutionized medicine. Nuclear power stations also offer mankind the biggest hope of ample energy during all his future existence on earth.

The point is that we cannot foresee consequences in detail. Faraday did not foresee a television set when he puzzled over his magnet-induced electric current. Einstein, as he worked out the equation $E=mc^2$, did not sense the mushroom cloud.

We now stand in the closing decades of the twentieth century, with science advancing as never before. We've discovered quasars and pulsars in the distant heavens. Of what

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use are they to the average man? Astronauts have brought back rocks from the moon at great expense. So what? Scientists discover new compounds, develop new theories. What for?

No one knows now. But *you* will know if you live long enough; and if not, your children or grandchildren will know. And they will smile

at those who say, "But what is the use of sending rockets into space?" just as we now smile at the person who questioned Faraday.

In fact, unless we continue with science and gather knowledge, we will be buried under our problems. Today's science is tomorrow's solution — and, most of all, it is mankind's greatest adventure.

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Hair Lines

It is amusing to note that, although Marx, Lenin, Ho Chi Minh and Fidel Castro are among the world's most famous bearded men, many communist countries consider beards anti-socialist, an obvious sign of bourgeois decadence.

The Romanian government, it seems, recently decreed the need for a special permit to wear a beard. Three grounds are considered legitimate: being an actor playing the role of a bearded character, having an excessively receding chin or a scarred chin.

The situation has reached such a point that those men who are permitted the imperialist-bourgeois provocation of having hair on their chin must carry a special card, like a driver's licence, which they are obliged to have with them at all times and must show when challenged by the authorities.

—*Le Parisien Libéré*, Paris

What Was That Again?

FROM the minutes of a town-council meeting in New Jersey, USA: "At the suggestion of Councillor William A. Peggy U presented the view of her body."

THE *Houston Chronicle*, quoting the mayor of a small Texas city: "We are planning a new gaol soon, and expect to be in it before the end of the year."

FROM a Florida learner-driver's examination leaflet: "Multiple-choice questions will be given on your ability to read and understand road signs and traffic signals. They will be given orally to those who can't read."

Conquest of the Killer Mountain

By PIERRE BONTE

The irresistible lure of an Alpine 'first' turned to a bitter determination for revenge

WE'VE won! This time we've won!"

Laughing and crying, the three exhausted men clung to each others' shoulders in the 120-kilometre-an-hour gale that hurled itself against them through the minus 30 degrees centigrade cold. It was January 17, 1973, and the men stood atop the narrow, snow-shrouded Alpine platform which forms the high crown of the Grandes Jorasses massif.

René Desmaison, aged 42, Giorgio Bertone, 32, and Michel Claret, 24, had just completed a gruelling

climb of the Walker spur, on the massif's north face—1,200 metres of vertical wall, corridors of black ice, icy rock plaques, chimneys and sheer drops, which they had conquered after 218 hours of effort. For Desmaison, the leader, this was his revenge on the sinister wall he had been forced to abandon two years earlier in tragic circumstances and after intolerable suffering.

A youthful-looking man with strong, craftsman's hands, Desmaison is considered today one of the best of living mountain climbers. In 1957, he became the first man in France to dare attack a mighty rock face in winter—the west face of the Drus, in the Mont Blanc massif. Since then, he has opened many new routes in the French and Italian Alps. But none cost him as much suffering, nor gave him such bitter triumph, as his victory over the Grandes Jorasses.

More than a decade ago, Desmaison began to dream of tackling the formidable barrier of rock and ice which rears up between France and Italy to crest in three main peaks: the Margherita spur, the Croz spur—and Mount Walker, most imposing and dangerous of them all. Twice before, he had defeated this monarch of the mountains, but the most abrupt route remained unconquered. It was a wall so vertical that the professional climbers say "it shows the path a falling drop of water would take." Here was a new "first," an

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irresistible lure, and preparations for the climb were made in deep secrecy just before Christmas 1970.

Friday, February 12, 1971. Word flashed round Chamonix that Desmaison had gone into action. Questioned by a local journalist, his wife, Simone, confirmed the rumour. With René was an experienced 24-year-old guide named Serge Gousseault. "They hope to reach the summit Monday or Tuesday," added Simone. "In fact, they've only taken enough food for six days."

Sunday, February 14. In three days, the two men had climbed more than 500 metres. But when they awoke on the narrow ledge on which they had sat through the night, fog had closed in. "Shall we turn round and go back, Serge?" René asked. "There's still time to get down again." Then, in mid-morning, the sky cleared and the two climbers decided to go on. When the time came to find another camping spot, however, they had advanced only about 100 metres, compared to 180 the previous day. Laboriously, they used their picks to hew a tiny platform in the ice.

Monday, February 15. The men survived a rockslide that almost swept Serge off the perch. Then snow began to fall, filtering under their clothing. Fumbling in the snow to find handholds soon numbed the climbers' hands completely. "Too dangerous to continue," Desmaison decided. "We'll

wait until the snow stops." It was only 3 p.m. They were still some 400 metres from the top. And they had only two days' supply of food.

Tuesday, February 16. It stopped snowing, but at noon, following his daily radio contact with his wife, Desmaison was hit by a snowslide that put the radio out of action. All contact with the world below was now cut.

That evening, René was alarmed to see that Serge's right hand was abnormally swollen.

Thursday, February 18. Despite atrocious suffering, the two men had moved only 90 metres in 36 hours. Serge could no longer use his right hand; shreds of flesh remained stuck to his glove. That morning, to top the six-metre overhang under which they had sheltered for the night, René had hauled his companion up bit by bit by a rope fastened under Serge's arms. Both were exhausted.

Friday, February 19. The climbers had slept badly. Their supplies were reduced to four cartons of honey and six bars of nougat.

René had to climb continuously down and up to disengage Serge's rope. After only 25 metres, he pulled up on a narrow sill, incapable of going any further.

Saturday, February 20. A bright, harsh light dispelled the haze. "Look at the summit," René cried. "Only 90 metres left to go. We'll be there tonight."

Serge moaned. He couldn't go



René Desmaison and Giorgio Bertone on the vertical wall, on their way to victory

on. And so began a tragic vigil.

Towards noon, a helicopter from the Chamonix Mountain Rescue Service circled over the two men. René said later that he gesticulated wildly, waving his arms and pointing to his motionless companion. But by a tragic misunderstanding the pilot thought his signals meant all was well. The helicopter left.

Sunday, February 21. The helicopter returned. Again, the pilot thought René's signals meant he needed no help.

Monday, February 22. Around midday, Serge became delirious. Thinking he heard a motor, he suddenly reared up. "There's the helicopter," he cried. Then he sank back, his eyes staring, sightless.

Tuesday, February 23. In Chamonix, a frantic Simone had finally succeeded in getting a rescue operation going. Twice, helicopters

had tried unsuccessfully to land.

Wednesday, February 24. René had developed a swollen wrist and woke in extreme pain. Hallucinations set in.

Thursday, February 25. Helicopters from the Mountain Rescue Service resumed their hesitant ballet over the Walker spur. Then, around 10 a.m., a pilot spotted a sheltered platform where five climbers could be dropped. Within half an hour they were on top of the spur; one of the rescuers was lowered to René's side and attached the still-conscious man to the cable. After he had been hauled to safety, Serge's body was raised.

Gousseault's friends later told René why Serge had collapsed: he suffered from bone decalcification, but had hidden the fact for fear that René would refuse to take him.

The image of his dead friend

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obsessed René. Serge was constantly in his dreams, and he decided to renew the assault on Mount Walker. The following summer, he made his preparations and trained a new team consisting of his son-in-law, Michel Claret, and Giorgio Bertone, an Italian guide.

After seven unsuccessful tries, at the beginning of 1972, they postponed any further attempt until the following winter.

Tuesday, January 9, 1973. The climb began at 9 a.m. Desmaison and Bertone relayed each other at the head of the rope; Claret, a shy, dark youth, followed calmly.

By the following evening they had covered the first 350 metres. On Friday, a helicopter spied the party 400 metres from the summit. If the weather held, the men would probably make the top by Monday.

Saturday, January 13. Worried by a storm forecast, Simone tried to warn her husband by radio. It was no use: René had just lost his walkie-talkie in a tricky passage.

"A stroke of luck," he said later. "We would have given up!"

Sunday, January 14. A snow-storm enveloped the climbers 240 metres from the top. The hell of 1971 was beginning all over again and progress slowed to a crawl.

Monday, January 15. They were at the same difficult passage where Serge had begun to weaken two years earlier. They were doing all

right. But by evening, they had advanced only 50 metres.

Tuesday, January 16. In the afternoon, the sky cleared. They had reached the narrow shelf where Serge's bolts and empty sack still lay. René was determined to race for the top. But when darkness fell, so did the snow. There was nothing for it but to stay where they were.

Wednesday, January 17. René decided to lead out alone. This was his fight. Bolt above bolt, through the wind and snow, he climbed 40 metres to the angle of an overhang where he set up a relay. The corridor beyond was now nothing but a howling blast-pipe; blinding, suffocating, the snow shot through it on a 95-km.-an-hour gale. The three men's faces were masks of ice.

One last length of rope . . . Desmaison describes those final minutes: "Only two metres more. I had a knot in my throat. I gripped a rib of ice with both hands, the wind flattened me on the summit, the painful images which had tormented me faded and I saw Serge's face, more peaceful now."

A new route was opened in the Grandes Jorasses massif, between the Linceul glacier and the Walker spur. Its cost: 23 days and 18 hours of suffering. And the life of a 24-year-old man. It is fitting that the name of René Desmaison, indomitable mountaineer, should remain for ever attached to that trail.

HE who laughs last planned to tell the story first. —Lane Olinghouse

IMMORTAL SPARTA

BY ERNEST HAUSER

This ancient Greek
city-state has left behind
no gilded palaces or elegant
temples. Her legacy is to
be found in an ideal



WE SPEAK of Spartan simplicity, of a Spartan diet, or of Spartan self-control; "Sparta" is a household word. Sung by poets and recorded by historians, the valour of ancient Sparta, the little city-state in southern Greece which evolved an unparalleled system of collective discipline, has been an inspiration to men and nations down through the centuries.

"Let us not believe that one man differs greatly from another," a Spartan king told his compatriots about to go to war, "but that he is best who is trained in the strictest discipline." Praised for their fortitude by fellow Greeks, the Spartans were a race apart. Unlike refined and sophisticated Athens, Sparta was made of iron, not of gold. Therein lay her strength—and her eventual undoing.

Offspring of Dorian conquerors swooping down from the north in prehistoric times, the Spartans made their home in a cluster of five villages in the rough broken country of the Peloponnese. By 600 B.C., when they erupted into history, they had already seized a near-by plain, enslaving most of the original farmers.

Only some 8,000 of Sparta's 50,000 population were authentic Spartans, entitled to full citizenship. All the rest were serfs and disenfranchised people from near-by villages. The serfs worked in the fields or laboured in the city as carpenters, cooks, potters, blacksmiths, their

masters being barred by law from any craft or trade. Serfs belonged to the state, and they were not bought and sold; but they were ever restless and ready to revolt. It was probably in order to keep them down that Sparta's legendary law-giver, Lycurgus—"Wolf-Repeller"—drew up the city's famous constitution.

Sparta was a hereditary kingdom, reigned over jointly by two kings of distantly related dynasties said to have sprung from Hercules himself. One king would lead the army in the field, flanked by a bodyguard that included prize-winning Olympic champions; the other minded the home front. Royal authority was balanced by a Senate, whose 28 members were chosen by acclaim from among senior citizens.

Day-to-day administration was entrusted to five magistrates, or "ephors." Elected for one year, they had power to discipline the kings; they put at least one king to death for treason. Another was fined for marrying a short wife who would produce "a race of kinglets." Free Spartans, male and over 30, formed the Assembly, which met each month at the full moon in order to approve or veto what major legislation was on hand.

The "Equals," as free Spartans proudly called themselves, were subject to a system of regimentation whose harsh excesses they bore cheerfully. Soldiering was their destiny from birth. The newborn

boy was shown to a committee of elders which pronounced him fit or unfit to grow up. Weaklings were left to die in a wild gorge outside the city.

While in his mother's care, a male infant was trained not to cry when left alone, and not to fear the dark. At the age of seven, he was sent away from home to join a "flock." Gruelling endurance tests faced him. To steel himself, he slept on reeds which he had plucked himself from the banks of the Eurotas River; after his twelfth birthday he went barefoot. He was taught to express himself tersely, with laconic brevity—so called for Laconia, the region in which Sparta lay. He also learned to endure pain in silence. One story tells of a young Spartan who stole a fox: encountering some people, he hid the furious beast under his cloak and let it gnaw him to death rather than betray his secret.

Boy Warriors. Teenagers were let loose alone in open country to forage for themselves and become good army scouts. As they grew older, they formed semi-military units, engaging in rough play and learning how to handle weapons. At 18 they were liable to military service—an obligation which would stay with them until they reached 60. Yet they remained under strict supervision.

Not until he was 30 was a man allowed to marry and have his own home, and his privacy was still not complete. He had to join one of the numerous fraternities whose

members—15 as a rule—dined in a common mess tent. Even the kings were not allowed to eat at home. One king, on the day of his return from war, wanted to dine with his wife and asked his fraternity fellows to send his rations to him; they refused. Admission to the fraternity depended on a ballot; if no fraternity accepted him, or if he could not furnish his share of the provisions, the Spartan could not exercise his rights as a free citizen.

Women got their own taste of Spartan rigour. Cosmetics and fine clothes were banned. Girls were expected to join sports teams, and choral singing, group dancing, and strenuous gymnastics were obligatory pastimes. But, because wives stayed at home during their husband's frequent absences, they often managed family affairs, and many of them amassed considerable wealth in landed property.

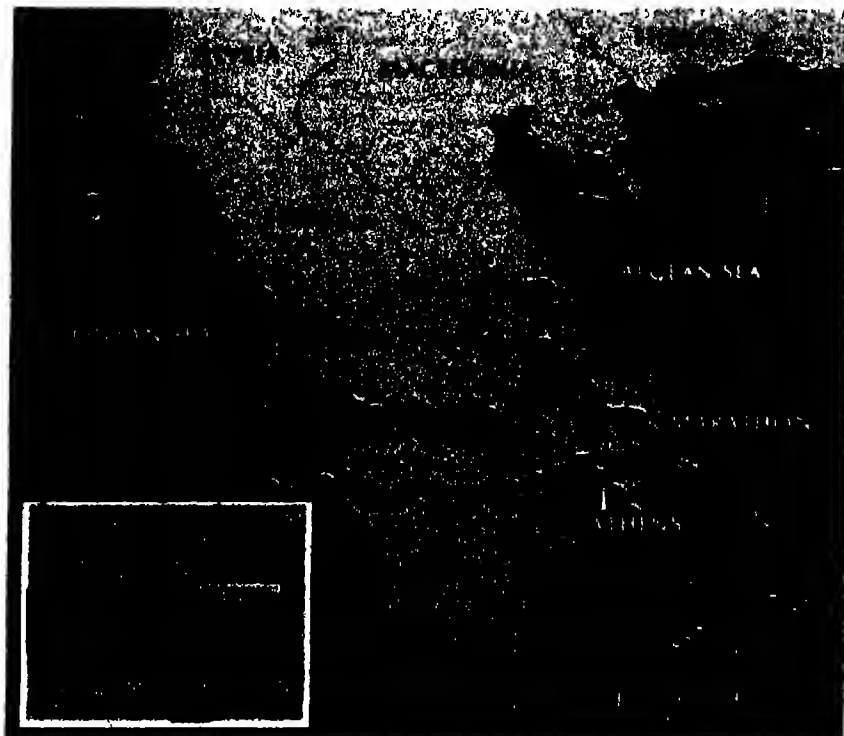
Though famous for their beauty, they rarely married outside their community. When told they were the only women in the world who dominated men, their answer was, "We're the only women *bearing* men!" They ardently endorsed the Spartan way of life,

and were said to admonish sons going off to war to "come back *with* your shield or *on* it." (The long shields, dropped by cowards so that they could run faster, made convenient stretchers for casualties.)

Except on government business, Spartans were not allowed to travel, and foreign visitors were greeted with suspicion. Thus, Sparta came to be the unknown quantity in Greece, met on the battlefield or not at all. Her isolation was reinforced by a strict law against the use of gold and silver money, which circulated freely in the rest of Greece. Spartan "money" consisted of rough clumps of iron; it took a team of oxen to transport comparatively small sums.

All ostentation was considered evil. A rich man from the Orient,

Greece at the time of the Persian Wars



granted political asylum, was told to leave at once when he attempted to give away some gold and silver vessels in return for Spartan hospitality. With no display of luxury allowed, even at home, "wealth was not worth envying." The effect of such austerity was that foreign merchants stopped coming to Sparta to sell their wares. The arts, which had once flourished, withered and dried up. Sparta became more Spartan every day.

Happy Band. For all their self-denial, however, the Spartans were a joyous people. To the envy of other Greeks who huddled in cramped quarters behind protective walls, they lived in cottages scattered among their fields. They were devoted to their homes and families. A man who went to call on King Agesilaus, we are told, found him surrounded by his children, riding a hobbyhorse. "Don't tell our fellow Spartans," joked the king, "unless they have small children, too."

Indeed, Spartans might have made love, not war, had they not formed a small minority in the midst of a hostile population—and had not the relentless rivalry among Greek city-states obliged them to bear arms or perish. They did not wage war more lightly than other men; they merely waged it better. The Spartan warrior let his hair grow long in order to "add terror to his face." His uniform was a red tunic, on which blood did not show. He carried spear, sword, breast-plate

and bronze shield. His sword was short, forcing him to fight at close quarters. One soldier claimed he always gave the enemy a chance to recognize the picture he had painted on his shield: a life-size bee.

In battle, Sparta's strength lay in her hoplites, the heavy infantry, which fought in serried ranks, eight or more deep, shields touching. This unassailable formation, bristling with spears and crowned with crested helmets, could wheel about with chorus-line precision. When one man fell, another slipped into his place.

Bravado was severely frowned on. "Decrease your courage or increase your strength," a show-off would be told. Once, a man was busy with his weapons when the signal sounded; he rushed out of his tent half-naked, grabbed a spear, and, plunging into the fray, slew many of the enemy. His officers awarded him a hero's laurels, then punished him for breach of discipline.

When little Greece was threatened by a Persian army half a million strong in 480 B.C., its two prime states, Athens and Sparta, sank their old rivalry. Forming an alliance with the lesser cities, they swore to defend their common fatherland.

Sparta was given the command of the Greek forces. Three hundred hand-picked Spartans—all of them fathers of living sons, hence expendable—took up positions in the narrow pass of Thermopylae

("Hot Gates") between the mountains and the sea. The road through it was the only way to the Greek heartland—the key to victory. To Persian taunts, "Our arrows will black out the sun," the Spartan answer was, "We'll fight the better in the shade!"

For two days the Persian attacks were beaten back with heavy losses. Then a non-Spartan Greek traitor led a Persian force over a mountain path that came out in the Spartans' rear. The cornered Spartans, led by King Leonidas, fought first with their spears, then with their swords, and finally with hands and teeth. They were wiped out. But their heroic death captured the imagination of all Greece and filled the foe with awe.

Their sacrifice was not in vain. Within a year, the Persian army was decisively defeated by a Greek force under a Spartan general. The danger from Persia was banished for ever, but the Greeks soon returned to their domestic squabbles. For 75 years, Sparta and Athens were locked in an even struggle for supremacy. Sparta eventually prevailed but she proved incapable of organizing peace. In many of the city-states she now controlled, she set up harsh

dictatorships, and managed to alienate even her friends.

The day came when Thebes, which had gained power quietly and steadily, challenged Sparta's superiority on the battlefield of Leuctra, in central Greece. The Thebans were outnumbered, and presented a short front, but their heavy infantry stood 50 deep, against the Spartans' depth of 12. And the sheer impact of this mass of bronze and muscle was enough to decimate the Spartan ranks—and finish Sparta as a major power.

Greece was to live through many a vicissitude after Sparta's decline, and the heroic little city eventually faded from the map. It was not until after the emergence of an independent Greece in 1830 that a new town was founded on the hallowed site in memory of its glory. Reborn Sparta—Sparti in modern Greek—is a friendly little market town of some 11,000 people. But, for evidence of ancient Sparta, "tamer of men," you will discover little more than a few crumbling stones.

Sparta has left behind no gilded palaces or elegant temples. Her legacy is to be found in an ideal; if we try to sum up what made her immortal, the word is "character."

Housebound

FRIENDS of ours recently inherited some property, which, unfortunately, is producing more taxes than income. When my wife invited them to stay with us, back came the response: "We'd love to come. But at the moment we're too property-stricken to go anywhere."

—Ralph Cooper

Husbands and wives must discover their own unique, natural way of achieving fulfilment

BY VIRGINIA JOHNSON AND DR WILLIAM MASTERS

A YOUNG couple decide to go away for a short holiday, leaving the children behind. Although neither spouse has mentioned it, both secretly hope that having some time to themselves will enable them to overcome the sexual dissatisfactions that have surfaced in their marriage: only rarely does she experience orgasm; he has been troubled by a diminished sex drive.

To their delight, the holiday proves a complete success. Their problems fade away, and they find

themselves responding to each other with an intensity that both believed they had lost for ever. When they talk about their regained ability to function sexually, they agree that the explanation is obvious. Away from their children, business and household tasks, they have the time and energy to enjoy themselves physically.

The real explanation is neither that obvious nor that simple. Two common mistakes have been made by this couple. First, they are thinking of sex primarily in physical terms. They believe that sufficient time plus sufficient energy equals satisfactory sex—an equation that happens to ignore a crucial element, sexual desire. And desire cannot be

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summoned by an act of will, holiday or no holiday. It occurs either spontaneously or not at all.

The couple's second mistake is their failure to realize that a key element in their unhappiness at home is their unquestioning acceptance of the principle that being productive is always more important than experiencing pleasure.

Certainly a flourishing sexual relationship cannot be accomplished by a wife who sees polishing floors as more important than sitting in a room and talking, or by a husband who busies himself cleaning the car instead of driving off with his wife for a quiet hour together. Such individuals insist that sex wait its turn until the "more important" jobs have been completed. If by then it is too late, or either partner is too tired, they may consider it no great loss. If, deprived of emotional sustenance, the sexual impulse eventually withers and dies, they may secretly feel a sense of relief.

Breaking Barriers. In other couples, sexual deprivation develops from over-emphasis on self-discipline. Let a man at the office keep his emotions under tight rein while he concentrates on getting his work done, let a woman at home do the same, and the transition to becoming an individual who acts according to spontaneous and authentic feelings becomes difficult. For some people, it becomes impossible.

If nothing else, such self-discipline exists as a force to be overcome by

a man or woman seeking to regain freedom of sexual expression. A husband, for example, wanders into the kitchen, moved by an unexpected wish to touch his wife. He hugs her from behind as she stands at the sink; she smiles perfunctorily and tells him that dinner will be ready in 20 minutes. He nods and returns to his book. For them to have behaved otherwise, to have enjoyed a moment's pleasure even though it might interfere with the task at hand, would have required making a conscious effort to alter the habits of a lifetime.

Even those couples who do accept their sexuality have difficulty understanding that the very part of themselves that they must discipline for purposes of work—their true emotions at any given moment—is the part that needs to be free of discipline if their sexual relationship is to flourish.

It is striking to note that during holidays—the one time when it is socially approved for people to do what they feel like doing at the moment they feel like doing it—non-orgasmic women frequently become orgasmic, and minimally functional men are frequently revitalized.

This was the case with the couple on holiday mentioned earlier. Certainly absence of daily worries and intrusions will contribute to the resurgence of sexual vigour, but beyond that is the fact that when a husband and wife are on holiday,

they feel free of the presumed cultural requirement to discipline their feelings. The impulse to touch, for example, can be immediately translated into touching; the wish to talk becomes a conversation that can wander where it will; being silent and lying side by side is to be united. All this can be profoundly sexual.

Husbands and wives who fail to gain this insight, who persist in the belief that sex should be scheduled for a specified time and place and that physical desire, like the capacity to work, is subject to will-power, run the very real risk of returning home after a fulfilling holiday only to find themselves soon sexually unresponsive again.

For sex, like work, may become, even for those who place a high value on sex, a matter of performance. Such couples always seem to have a goal in view: ejaculation for the man, orgasm for the woman. In their view, sex is a purposeful activity and intercourse is its objective. If this goal is accomplished, the job has been satisfactorily handled.

Goal-orientated sex, however, is usually self-defeating. At first there may be extraordinarily intense excitement of the senses. But a steady decline in sensual responsiveness is all but inevitable, because the power to evoke excitement by purely physical, tactile stimulation is subject to the law of diminishing returns.

This is one of the reasons so many couples complain of sexual boredom. Like workers on an assembly

line, they go through routine motions and produce predictable results. They are following directions, not expressing feelings. They want to know, for example, how many times a week they should have intercourse. If "everybody else" has it three times a week, then they feel they should have it three times a week. They come to believe that anything less means something must be wrong with them—and that anything more means something quite different is wrong with them.

True to Pattern. Boredom also results from stereotyping sex roles. Each partner handles his or her responsibility. The husband, for instance, is expected to initiate sex because both he and his wife believe that is his "job." Thus the sequence of events becomes completely routine, and the sexual relationship sooner or later becomes perfunctory.

The solution for avoiding such a deterioration might seem to some people to be obvious. Sex, like work, can be improved by an improved technique, they believe. If they get better instruction and practise hard, sooner or later everything will be fine.

This simply is not true. No formula answer is possible. Each partner must feel free to discover his or her unique way of expressing wishes, desires and needs spontaneously and naturally, never by assignment on the basis of being male or female, never by the book.

It is often said that couples have

to work at making a success of marriage. The term seems unfortunate, particularly in relation to sex. If there is one thing a couple should not do, it is to work at the relationship as though it were some kind of task. Yet this is the message carried by a discouraging number of books on the subject.

More often than not, such books do a disservice to troubled couples. Husbands and wives seeking greater sexual happiness need less, not more, deliberate direction of their efforts. If they have anything to discover, it concerns themselves as

unique individuals and the privileges and responsibilities of their relationship.

They have to learn to trust each other fully, to be vulnerable, one to the other, and to let their feelings unfold in their own way at their own time. They must learn to communicate, not simply with words, but also with a touch or a glance that needs no explanation.

Above all, a man and a woman must learn to be present to each other—not just to look, but to see; not just to hear, but to listen; not just to talk, but to commune.

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I, Tharoor Parameshwar, hereby declare that the particulars given above are true to the best of my knowledge and belief.

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The ravages of man and nature
are threatening to turn Australia's
outback into a lifeless dust-bowl



By LENNARD BICKEL

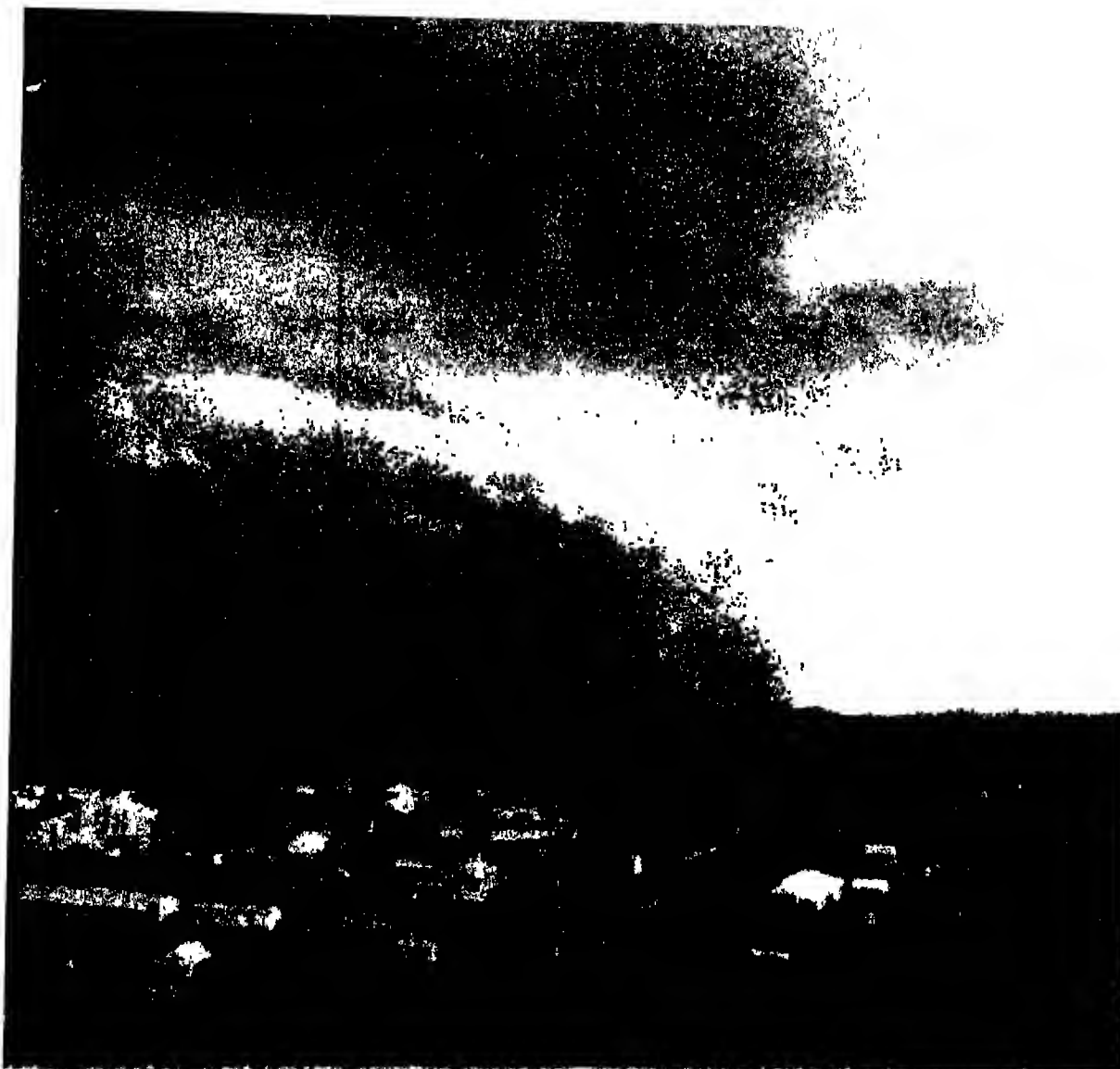


STRONG winds from Australia's far north-west squalled across the ancient, eroded landscape. From bare plains where millions of animals—animals alien to the land—had foraged out native plants, fine red topsoil rose. For kilometre after kilometre this sun-baked soil mushroomed into the sky, forming a cloud of dust that changed colour between morning and evening—from red to crimson, and then to violet at the higher levels. A plane

flying south from Darwin reported dust rising to 4,877 metres over a 258-kilometre front.

In Alice Springs the townsfolk awoke that morning of September 15, 1966, to a choking world. The dust penetrated their homes, covered their furniture, invaded their throats, eyes and ears. Billowing and frothing, it masked the hot sun and cast a copper-coloured pall over the people below.

In Canberra, Vic Bahr, regional



A 160-km/h dust storm approaching the town of Alice Springs

director of meteorological services, matched telexed reports of the dust cloud's advance across Australia with observation of a high-ranging rain front approaching from the south, and predicted: "Red rain will fall across south-eastern Australia later today."

And so, in the southern cities, people watched in wonderment as the rain fell and covered their streets, their roof-tops and cars with gritty, brick-red dust. *Pravda's*

Canberra correspondent Yuri Yasnnev sent his story to Moscow and his paper gleefully reported the phenomenon of "Red Rain in Australia."

But weathermen like Bahr knew this dust storm was no isolated phenomenon. They knew that many of the vivid sunsets admired by east-coast Australians were caused by light reflections from great dust clouds made up of uncounted thousands of tons of Australian topsoil, the life-blood of the inland. They

knew that these brilliant skies were seen as far away as New Zealand, more than 1,900 kilometres across the Tasman Sea. They knew that the dust in the mouths of the people of Alice Springs carried the gritty taste of disaster, the taste of a desert in the making.

The pattern was clear: millions of years of scorching sun, cold nights, wild winds and sudden, thundering rainstorms had eroded Australia's mountains and scattered their remnants across vast plains of stone and rubble. All forms of life in the outback depended on this skimpy layer of soil. Plants and grasses existed in delicate balance with the savage environment and contributed to their own survival by holding the soil together against the onslaught of wind and rain.

Ravaging Hordes. But they had evolved in a world without men; they were not fashioned to withstand the mouths and hooves of the tens of millions of animals introduced by European settlers last century. In a single century of pastoral exploitation, the face of the Australian continent had taken a hammering unmatched in its history. As the plant cover had been destroyed, erosion had run amok, and the great dust storms had begun.

To scientists, both at Canberra's Commonwealth Scientific and Industrial Research Organization (CSIRO) and elsewhere, Australia seemed to be facing an environmental disaster. Comparison with the

deserts which grazing herds and flocks of sheep had created in North Africa and the Middle East in pre-biblical times was inescapable. Was Australia set on the same calamitous course?

More than 2,500 million hectares of arid country had been and were being exploited for meat and wool production. Would much of this become a new wasteland? Would the whole heartland of the Australian continent collapse into a desert like the Sahara?

In 1965, the head of the CSIRO's plant industry division, the late Dr John Falk, had toured some of the worst-stricken outback areas and returned to Canberra profoundly pessimistic. He could see no hope of a green revolution restoring the ancient soils. The outback simply did not get enough rain to support the nitrogen-breeding clovers which had transformed 162 million hectares of rainfed Australia. The best hope, Falk had told colleagues, was "to hold the land to its present run-down condition."

But CSIRO requests for funds to establish a special research project with this limited objective in mind had been rejected by Treasury officials. Like most Australians, the decision-makers in government had only a hazy idea of what was happening in the outback. Tales of thick carpets of wild flowers, appearing like magic after the first kiss of rain, coloured their reasoning. The outback only needed water,

they argued. The dead heart was not dead; when it rained, it sprang to instant life.

But Falk and his fellow scientists knew this to be a delusion. Outback plants had only a few pitiful weeks after rain to hurry into existence, to flower and to seed, before bitter drought returned and the searing sun dried out their juices. During this time cattle, sheep and rabbits increased in number. In the dry times that followed the rain, the plants were grazed even nearer to extinction and the earth was again left bare to the destroying wind.

Into Action. In 1967 money was at last given to the CSIRO to set up a research programme—just enough to put half a dozen men to work under the direction of Ray Perry. Perry's group was called the Rangelands Research Unit.

After a year of intense labour, Ray Perry went before the Advisory Council of the CSIRO with a grim tale. Australia's rangelands, he reported, showed marked deterioration. The sparse vegetation—whose life cycles were still more or less a mystery to science—was being eaten away by a total of 48 million sheep, 4.5 million cattle, and by millions of rabbits and other wild animals. The region of potential risk included 86 per cent of South Australia, 86 per cent of the Northern Territory, 87 per cent of Western Australia, 46 per cent of New South Wales and 63 per cent of Queensland.

Perry blamed pastoral grazing

methods for much of the damage: "Some properties are deliberately exploited by short-term occupiers seeking quick profit. In other places the damage has been done in ignorance."

But if pastoralists were ignorant in the techniques of outback land use, so in 1968 was science. Before a blueprint for rangeland management could be devised, specialists had to understand how the four major elements of the ecosystem—soils, plants, animals and climate—interacted with one another.

A committee was set up under Ray Perry's chairmanship to co-ordinate CSIRO work with that of state governments and university experts. Consultations were held with arid-zone scientists from America, Canada, Mexico and Israel; exchanges of information and personnel were arranged. New field research units were established in key areas such as that around Alice Springs.

Because there had never been a scientific study of Australia's rangelands—larger in area than half Europe—Perry's researchers had to start with absolute basics. What kind of plants grew in the arid inland, for example? Which ones provided the best food for animals and which were important in holding the soil together? What were the plants' growth cycles and seeding habits? How vulnerable were different varieties to grazing damage?

The scientists soon established

that Mitchell grass was of prime importance in the rangelands of Queensland, the Northern Territory and northern New South Wales. An excellent stock food, the plant spread wide, soil-binding roots. Only one-seventh of its mass appeared above ground. It recovered quickly after grazing—unless the surface greenery was eaten below a couple of centimetres. Then it died.

Would it be possible to control grazing so that Mitchell grass and other erosion-countering plants were preserved? It was impossible to say, because next to nothing was known about the behaviour of animals on the range. So began the taxing task of studying the routines of rangeland cattle, sheep and kangaroos.

On Patrol. At first the scientists shadowed their quarry on motor cycles, starting before dawn and tracking selected animals as they grazed the parched land and made their twice-daily visits to watering points. Later, aircraft were used to study the movement of herds and flocks. More recently, telemetry sets have been developed which, fitted on to the backs of animals, record their movements and general condition.

Behaviour patterns are now starting to be established. The scientists have found, for example, that beef cattle graze out to a distance of 13 kilometres from their customary

watering point, while sheep graze over a radius of only eight kilometres. Cattle have a distinct order of preference in types of feed and will eat out a whole area containing their favourite grass before turning to other locations within the 26-kilometre diameter of their grazing circle.

Information is also being assembled about rangeland weather systems, in the hope that future climatic conditions might be predictable. Rangeland soils are being studied more closely than ever before. "In the past five years," says Ray Perry, "we have gathered more information than was assembled in the previous century."

Perry and his colleagues are now fairly optimistic about eventually devising ways to continue grazing the outback without turning the land into a dust-bowl. But how long will it take? Says Perry: "Given ample funds and more research workers, we could produce a workable plan within, say, five to ten years. But we need more men, we need more money. We have little time to spare."

Unless Perry's needs are met, wind and drought will cut deeper into the topsoil, the dust will rise to make colourful sunsets over the cities and future Australians will never see the land as it was. They will live on the decreasing green rim of a vast bowl of red dust.

ALL men are born equal but the tough job is to outgrow it. —Don Leary



Humour in Uniform

THE wife of the Commandant of an Officers' Training School in New Delhi was noted for her tact, particularly with boys who spoke little English.

At one party, a boy who had asked her for a dance confided that where dancing was concerned, he was just a "starter."

"That's all right!" she replied. "You be the starter and I'll be the accelerator."

—E. S. T., New Delhi

DURING Queen Elizabeth's visit to Turkey in 1971, I was serving on board the British naval vessel *Hermione*, escort ship to the royal yacht *Britannia*.

Both ships were anchored close together in Istanbul harbour, and whenever the Queen was due to go ashore, orders forbade any members of *Hermione's* crew to appear on the upper deck.

One evening the Queen was scheduled to disembark just as the sunset flag-lowering ceremony was due to

take place, and the officer in charge faced a dilemma: should he start the ceremony or wait for the Queen to go ashore? His problem was solved when the following message was piped: "Tonight the sun will set ten minutes later than usual."

—Stephen Begley, Birmingham, England

WHENEVER night flying exercises were conducted at the air station near our town, the air-traffic controller would receive calls from enraged citizens whose sleep was interrupted. Explaining how the air defence needed to stay in shape in order to give proper protection was fruitless. So he decided on a new approach. When someone rang, he'd ask hesitantly, "Are you sure it was one of *ours*?" Inevitably he'd get an angry, "Of course I'm sure." With that, he'd let out a deep sigh of relief and a "Thank God!"

—Barbara Warren, Virginia Beach, USA

A merchant ship captain was determined to run a smart ship. He requested the ship's officers to wear ties at all meals. Everyone complied except the crusty old chief engineer. None of the skipper's threats had any effect.

Then, one morning at breakfast the skipper was pleased to find the chief wearing a tie. His joy was short-lived, however. Finishing his meal, the chief left the table—wearing no trousers.

—Lt.-Col. J. A. Strouhal

ON HIS release from an army medical centre, my husband was given a prescription marked: "Take three times daily until exhausted." —Mrs. H. M. Fields

Rs. 150 is offered for your "Humour in Uniform" story. Details on page 65.

Computers With a Bedside Manner

BY WILLIAM ADRIAN

Undertaking a multitude of time-consuming tasks, these machines are a boon in British hospitals and play a major role in preventive medicine

THE DOORS of an intensive therapy ward at London's Westminster Hospital swing open and four-year-old Brian is wheeled in. He has just spent four hours in the operating theatre while heart surgeons mended a hole in his left ventricle and widened a valve.

With unruffled speed, seven doctors and nurses reach across the unconscious child, attaching electrical leads, placing tubes in bottles, pushing buttons. In five minutes, Brian is hooked up to instruments that will measure blood drainage and urine output, will check his pulse rate and temperature, and monitor—second by second—four vital blood pressures via catheters placed inside his heart and arteries during surgery.

Each key factor affecting Brian's recovery is now under constant scrutiny. But an even more vital watch is being kept—by a computer. Programmed to double-check and compare every reading fed into it

by the monitoring instruments, it flashes warnings to Brian's nurses whenever measurements show untoward variations.

If a nurse or doctor wants to confirm Brian's condition, they press buttons on a small keyboard. At once a visual progress report, from the time Brian entered the ward, flashes on to a television screen connected to the computer.

To help nurses maintain the exactly correct blood and fluid balance, so vital to open-heart surgery patients, the computer gives instant information on the amounts of fresh blood and saline solution which should be flowing through the intravenous drips.

At one time, nurses had to make perhaps 14 different calculations and measurements on blood and urine loss every 15 minutes. The computer does the job for them—faultlessly—in milliseconds.

"Before we had the computer,"

one sister told me, "we seemed to spend most of our time juggling figures. Now we can devote all our attentions to actual nursing."

Computers have so far moved slowly into medicine, held back by doctors' conservatism and, perhaps, some resentment towards an automated challenge to their expertise. But attitudes are changing as computers show just how useful they can be: they forget nothing, never tire, always produce an accurate answer. Westminster's computer can watch over six patients at a time, and since it began monitoring in April 1972 has helped save the lives of 400 critically ill people.

On some time-consuming chores, computers have become indispensable. They help hospitals keep up with the demand for laboratory tests that is growing by 20 per cent a year. Larger automatic analysers check 20 different body chemistries in a single specimen of blood more quickly and cheaply than one traditional test.

Forewarned. Many laboratories now routinely run the whole range of investigations on every patient receiving a biochemical check, providing invaluable early detection of unsuspected disorders.

Workloads have quadrupled, over the last 15 years, to as many as 3,000 analyses a day, without any increase in staff or size of laboratories, but with noticeable increase in accuracy. Says Dr Frederick Mitchell, divisional head of the Medical Research Council's Clinical Research Centre,

"Even in the best laboratories, when all the tests were carried out by humans, the error used to be five per cent. The human error in handling automatic equipment is now less than one per cent."

Computers' superb mathematical powers have proved particularly helpful in guiding a doctor's selection—from among several thousand possible permutations—of the best radiotherapy treatment to attack a tumour. Details of its size and site are fed in, and the operator then tests out different intensities or directions of treatment beams. The computer—not the patient—is the guinea-pig, and a task which would take humans many hours is completed in 30 minutes or so.

Glasgow Royal Infirmary's cardiology department computer performs another time-saving task: the "reading" of electrocardiograms. It scans more than half the hospital's annual 25,000 ECGs in half a minute each—four times faster than human processing. Since something like three million ECGs have to be read in the United Kingdom every year, the potential national time-saving is enormous.

Increasingly, computers are helping to make better use of existing techniques. A computer-assisted X-ray scanner allows doctors for the first time to see any horizontal cross-section of the brain, like an illustration in a medical textbook. The scanner's inventor, Godfrey Hounsfield, realized that conventional

X-rays could distinguish only between tissues of markedly different density. "By scanning objects at many angles with highly sensitive detectors," he says, "and using a computer to correlate the results of these 43,200 readings, it is now possible to obtain almost 100 times more information on brain tissue."

On Tape. In theory, there is no limit to the problems a computer can help with—even diagnosis. Researchers at Leeds University have programmed a machine to distinguish among seven types of ailments with similar symptoms of acute abdominal pain, such as appendicitis and pancreatitis. The intention is not to replace the doctor, but to jog his memory and reassure him that he hasn't overlooked anything. During the first eighteen months, computer-aided diagnoses were 91 per cent accurate, while the best score among the team's senior clinicians was 81 per cent.

From help in diagnosis, it is but a short step for computers to conduct actual interviews. At several British hospitals they now relieve busy consultants of the lengthy initial history-taking. Patients suffering from stomach ulcers, chest complaints, psychiatric disorders, press "Yes," "No," "Don't Know" or "Don't Understand" buttons in response to questions tapped out on a teletypewriter or asked by a doctor seen on a television screen. Programmes are also available in foreign languages: in one Bradford

hospital, film of a Hindi-speaking doctor is put on screen to elicit information from Indian patients.

Far from complaining about the computer's impersonality, patients often find it less forbidding than an initial interview with a doctor. They never feel they are wasting its time; it repeats questions as often as they wish; it doesn't raise its eyebrows at truthful answers on smoking and drinking. Some patients even find the mechanical questioner so sympathetic that they nod in agreement with its comments.

Computer interviewing is particularly useful for complaints such as bronchitis, when a first meeting with a doctor can be so distressing that lung function is affected and a patient finds it almost impossible to speak.

Safeguard. Dr Christopher Evans, an experimental psychologist with the National Physical Laboratory, who has devised several interview programmes, believes that "Computer interviewing will prove invaluable in helping those with psychiatric or sexual problems. Normally, such patients are reluctant to seek medical help; having screwed up their courage to make initial appointments, they often back out at the last minute."

For the future, computers could help Britain attain the ideal of a real national *health* service, with the emphasis on preventing, rather than curing, disease. To achieve this, every man, woman and child would

need regular physical check-ups absorbing, under present conditions, millions of man-hours, and requiring vastly increased numbers of doctors. But automated, foolproof testing equipment, run by nurses and para-medical staff, could produce a dossier on every patient as often as needed.

Case History. The British United Provident Association runs such an automated health screening service—Europe's largest—at its Medical Centre in London. On arrival, a secretary checks into the computer the patient's name, address, age and sex, and gives him a plastic card that will identify him to the computer at each testing point.

Seated in a booth, the patient is asked about his health and medical history by questions flashed on to a screen; he answers by pressing one or more of five white buttons against possible answers. Then he moves on to actual examinations. The results are fed into the computer and stored in its memory. Hearing, vision and lung function are tested; an ECG taken. Blood pressure is checked twice and an average worked out by the computer. Technicians take blood samples and send them to an automated laboratory that carries out 17 different checks. When all the other tests, including chest and

abdominal X-rays, are completed and results processed by the computer, it prints out a report with the most significant abnormalities starred for a doctor to study.

Of the 16,000 who visit the BUPA Medical Centre each year, a third are found to have abnormalities; these can be simply a minimal rise in blood pressure, varicose veins, early stiffness in joints. But two-thirds of those with abnormalities have conditions that need treatment at once: undiagnosed cancers, dangerously high blood pressure, silent heart attacks. Records stay in the computer's "archive file" so that they can be compared with later examinations and abnormal trends spotted.

Since early diagnosis can be a lifesaver, this detection of early warning signals could one day become the most important part of the National Health Service. Indeed, many of Britain's doctors believe that such health screening is essential if they are ever to cut back on the costs and toll of disease. "We must go on to develop simpler and less costly techniques," says Professor Richard Schilling, Director of the Institute of Occupational Health, "so that one day the regular surveillance of people can be as routine as the regular servicing we give our cars."

ADAPTED FROM AN ARTICLE BY WALTER ROSS

WHEN the Boston Symphony played an avant-garde composition which repeats a single chord endlessly, someone in the balcony screamed, "Stop! I'll confess."

—*Newsweek*

Ways to Improve Your Memory

Practical advice for developing a mastermind

By S. A. SCHREINER

How would you like to be able to remember names, birthdays, anniversaries, telephone numbers, speeches, what you've read in books and magazines, shopping lists, even where you left your car keys or your glasses? Well, you can, say the authors of *The Memory Book*. All you have to do, they claim, is strengthen one mental muscle, your memory — and they tell you how to do it.

There is, of course, nothing new about memory training — or mnemonics, as it is technically known. Folklore is full of such devices to trigger the memory as tying a knot in your handkerchief, or repeating "Thirty days hath September . . ." But what Harry Lorayne and Jerry Lucas have done in *The Memory Book* is to take the basic concepts

found in the extensive literature on mnemonics and make them simple and readily understandable.

Harry Lorayne became interested in memory 37 years ago in an effort to alleviate the stomach-aches he suffered at school because of daily tests. He developed his memory to the point where on American television chat shows he would memorize up to 500 names of people in a studio audience. Finally, he began writing about memory development.

One of Lorayne's books came to the attention of Jerry Lucas, a brilliant, 203-cm.-tall basketball player at Ohio State University, who now credits the Lorayne systems with helping him earn high academic standing. Lucas went into professional basketball, and ended up with

BASED ON "THE MEMORY BOOK," © 1974 HARRY LORAYNE AND JERRY LUCAS, PUBLISHED IN THE UK BY THORNS PUBLISHING GROUP, WELLINGBOROUGH, NORTHAMPTONSHIRE. THIS BOOK IS CURRENTLY OUT OF PRINT

the New York Knickerbockers. Not long after he arrived in New York, he looked up Lorayne and the two men were soon collaborating. Now Lucas also astonishes audiences with such stunts as memorizing a whole issue of *Time* magazine.

How do these men, self-admittedly of normal intelligence, accomplish such feats? Fundamentally, mnemonics rests on imagination—the ability to create mental pictures as vivid as anything the eye sees. So the first problem in memory training is to translate whatever you want to remember into a vivid image. “The trick,” Lorayne told me, “is to devise a mental image which is unusual or ridiculous—the more ridiculous the better.”

Most of us don’t actually forget something, Lorayne and Lucas contend; we just don’t make ourselves fully aware of it to begin with. Suppose, for example, you put your glasses down on the television set and then, a few minutes later, can’t remember where they are. The cure for this is to set up a ridiculous image at the moment you put your glasses down. Imagine the television aerial going through your glasses and shattering them. You’ll know where they are hours later.

A more rigorous technique is needed to remember lists, long numbers, speeches and the like. Providing a list of ten unrelated items—airplane, tree, envelope, ear-ring, bucket, song, basketball, sausage, star, nose—Lorayne and

Lucas demonstrate how these can be memorized in sequence by linking ridiculous pictures: an airplane growing in place of a tree, envelopes sprouting on a tree, envelopes dangling from your ear-lobes, a bucket wearing ear-rings, a bucket singing, a basketball singing, a sausage playing basketball, a sausage twinkling in the sky, a face with a star for a nose. With such links you can roll the film backwards or forwards in your mind, remembering not only the items but the sequence.

Suppose you want to remember to pick up a lamp you ordered and also to buy typing paper. “Start a link,” the authors write. “Associate lamp to paper. Perhaps you see yourself putting a lighted lamp into your typewriter. You don’t want to forget to pick up your suit at the cleaners. Continue the link: perhaps you’re wearing sheets of typing paper instead of a suit.”

Concrete objects and actions can be pictured easily; more elaborate devices are needed to cope with abstract numbers or words. One device is the substitute word. “When you hear or see a word or phrase that seems abstract or intangible, think of something—anything—that sounds like, or reminds you of, the abstract material and can be pictured in your mind,” they advise.

They also stress the value of working out your own substitute thoughts or phrases: not only will the pictures they evoke stay in your memory, but the act of devising

READER'S DIGEST

a suitable substitute concentrates your mind on what you want to remember.

Memorizing speeches combines the substitute-word system with linking. Lorayne and Lucas recommend that you write out your speech, then substitute for each major thought a key word or phrase that can be visualized, and finally link the key words together in the proper sequence. Once reminded of the major thought, the average person can remember easily what he planned to say about it.

This works also for reading. By picking up key words or thoughts as you go along and translating them into visual images linked together, you can, with steady practice, fix in your mind whatever you are reading, almost at sight. This may slow your reading at first, but the greatest amount of reading time is lost by having to go back to pick up something that has already slipped the mind.

Numbers present the most formidable problem to the mnemonic

athlete. To handle them, Lorayne and Lucas advocate use of consonants for figures, so that numbers can be expressed in words. There are only ten digits and, fortunately, ten basic consonant phonetic sounds—but you have to crank up your memory just to keep in mind the suggested sounds to equal the various digits. They are: *t* or *d* for 1; *n* for 2; *m* for 3; *r* for 4; *l* for 5; *j*, *sh*, *ch* or soft *g* for 6; *k*, hard *c* or hard *g* for 7; *f*, *v* or *ph* for 8; *p* or *b* for 9; *z*, *s* or soft *c* for 0.

Using the consonant sounds, you can turn numbers into words or phrases. An impossible number to remember — 91852719521639092112 — becomes easy when you visualize the sentence, "Beautiful Naked Blonde Jumps Up and Down." Translation: *b* equals 9, *t* equals 1, *f* equals 8, and so on.

Like all exercises, those for mnemonics must be applied faithfully before the memory muscle can really be stretched. There is little doubt, however, that you will find the effort rewarding.

Cartoon Quips

YOUNG mother to husband leaving for work: "I wouldn't rush things, dear. When the mortgage is paid off and the children have finished university, then you can spit in his eye!"

—Lichty

ONE pneumatic-drill operator to another: "I used to drive a school bus, but I couldn't stand the noise."

—J. M.

WOMAN, standing on her head, to visitor: "The trouble with doing yoga exercises at home is you're forever seeing a lot of places you forgot to dust."

—Franklin Folger



BY GEORGE KIRKHAM

Instead of lecturing about the police, an American criminologist decided to join them. It was the most valuable lesson of his life

FOR SOME time, as a professor of criminology, I found myself troubled by the fact that most of us who write books on the police have never been policemen ourselves. Yet we members of the academic community have often been quick to find fault with the police.

From incidents in the news, we have fashioned stereotyped images—the brutal cop, the racist cop, the corrupt cop, the discourteous cop. What we do not see are the thousands of dedicated men and women police officers struggling against almost impossible odds to preserve our society and everything in it that we cherish.

Many of my students were former policemen, and they often responded to my frequently critical lectures with the argument that I could not possibly understand what a police officer has to endure until I had been one myself. Eventually I decided to take up this challenge: I would become a policeman to test the accuracy of what I had been teaching. One of my students—a young police officer on educational leave from the Jacksonville, Florida, Sheriff's Office—urged me to contact the sheriff and under-sheriff with my proposal.

Jacksonville appeared to be an ideal area. A rapidly growing port and industrial centre with more than half a million residents, it had experienced America's major social problems: crime and delinquency, racial unrest, poverty and mental

illness. It had fairly typical inner-city slums and a black ghetto. Its 800-man police force was considered to be one of the most progressive in the country.

I made it clear to the sheriff and under-sheriff that I wished to function not as an observer, but as a full-time uniformed patrolman, for four to six months. They agreed, on the understanding that I would first have to meet the same requirements as any other police candidate—a thorough character investigation, a physical examination, the same training standards. The only other stipulation was one with which I strongly agreed: for the sake of morale, every officer must know who I was and what I was doing. Otherwise, I would be indistinguishable from them in every respect, from my .38 Smith and Wesson revolver to my badge and uniform.

Learning the Ropes. The biggest obstacle was the required 280 hours of law-enforcement training. For four months, four hours each evening and five nights a week after my teaching duties, I learned how to fire a pistol, how to approach a darkened building, how to question suspects, investigate accidents and take fingerprints.

Some nights I went home after hours of physical-defence training with tired muscles, bruises, and the feeling that I must be mad to undertake such a project. But graduation came, and with it what was to be the most difficult but rewarding

educational experience of my life.

As I write this, I have completed over 100 spells of duty as a newly qualified officer, and so much has happened in the short space of six months that I will never be the same man again. Nor will I ever forget standing in front of the Jacksonville police station on my first day. I felt incredibly awkward and conspicuous in the new blue uniform and creaking leather.

Brief Encounter. The first of what I call my "street lessons" came immediately. My partner and I were dispatched to a bar in town to handle a disturbance complaint. Inside, a boisterous drunk was refusing to leave. Having had experience in counselling, I hastened to take charge. "Excuse me, sir," I said smiling pleasantly, "but I wonder if you would step outside and talk with me?" The man stared at me in disbelief through bloodshot eyes. Then he swung out, striking me on the shoulder. Before I could recover, he swung out again—this time tearing away my whistle chain. After a brief struggle, we locked him in the back of our patrol car.

As a professor, I had grown accustomed to being treated with respect and deference, and I somehow assumed that this would continue in my new role. Now I learned that my badge and uniform, far from shielding me from disrespect, often acted as a magnet which drew towards me many individuals who hated what I represented. Bewildered, I

looked at my partner, who only smiled.

In the days and weeks which followed, I was to learn more. As a professor, I had always sought to convey to students the idea that it is a mistake to exercise authority, to make decisions for other people, or rely upon orders and commands to accomplish something. But as a police officer, I was forced time and time again to do just that. I met individuals who interpreted kindness as weakness, as an invitation to violence. I also encountered men, women and children who, in fear or desperation, looked to the person behind the uniform for guidance and direction.

I found that there was a world of difference between sitting in my air-conditioned office calmly discussing with a rapist or armed robber his past problems and encountering such individuals as the patrolman must: when they are violent, hysterical, desperate. Such offenders had seemed so innocent, so harmless after the crime and in a sterile setting. Now, as a police officer, I encountered the offender for the first time as a menace to my personal safety and the security of society.

Among all the tragic victims of crime I saw in six months, one case stands out. There was an elderly man who lived with his dog in a block of flats in town. He was a retired bus driver. I usually found them both standing at the corner on my way to work. Sometimes they would

walk a hundred metres with me.

One evening my partner and I received a call to a street shooting near the block of flats. The old man was lying on his back in a large pool of blood. He clutched a bullet wound in his chest and gasped to me that three young men had stopped him and demanded his money. After seeing how little he had, they shot him and left him on the street.

Such daily stresses soon began to take their toll on me. I became sick and tired of being reviled and attacked by criminals who could usually find sympathetic judges and jurors eager to provide them with "another chance." As a criminology professor, I had enjoyed the luxury of time in which to make difficult decisions. As a police officer I found myself forced to make the most critical choices in seconds: to arrest or not to arrest, to give chase or let go—always with the nagging certainty that others, those with time in which to analyse and think, stood ready to judge and condemn me for whatever action I might take or fail to take.

Day in the Life. I found myself forced to deal with problems more difficult than anything I had confronted in a correctional or mental-health setting: family fights, mental illness, potentially explosive crowd situations, dangerous individuals. I had always been insulated from the kind of human misery which became part of the policeman's everyday life. Now, the often

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terrible sights, sounds and smells of my job began to haunt me.

I was repeatedly amazed at the humanity and compassion of my fellow police officers. My stereotypes were time and again shattered by acts of kindness: a young patrolman giving mouth-to-mouth resuscitation to a filthy derelict, a grizzled old veteran who carried bags of sweets for impoverished ghetto kids, an officer who gave money to a stranded family he would probably never see again.

Eventually I went through the humbling discovery that there were definite limits to the amount of stress I could endure. One evening, at the end of a long, hard shift, I was tired and tense. My partner and I were heading for a restaurant and a bite to eat, when we heard the sound of breaking glass and spotted two long-haired teenage boys running out of a church.

We confronted them, and I asked one for identification. He sneered at me, cursed, and turned to walk away. The next thing I knew, I had grabbed the youth by his shirt and spun him around, shouting, "I'm talking to you, punk!"

I felt my partner's hand on my shoulder and heard his reassuring voice behind me, "Take it easy!" I

released my grip on the adolescent and stood silently for several seconds. My mind flashed back to a lecture during which I had told my students, "Any man who is not able to maintain absolute control of his emotions at all times has no business being a police officer."

I have often asked myself: Why does a man become a cop? No one else wants to sort out a family's problems at 3 a.m. on Sunday, or to enter a darkened building after a burglary. No one else wants to stare at poverty, mental illness and human tragedy day after day. What makes a cop stay with the disrespect, legal restrictions, long hours, low pay and the risk of being killed or injured?

The only answer I can think of is one based on my own limited experience as a policeman. Night after night, I came home with a sense of satisfaction and contribution to society that I have never known in any other job. Every police officer understands that his ability to back up the lawful authority which he represents is the only thing which stands between civilization and the jungle of lawlessness. Somehow that feeling seemed to make everything—the disrespect, the danger, the boredom—worthwhile.

Crash Course

AN ECONOMIST is a man who stands at the edge of a half-drained swimming pool and says in a very, very quiet voice as you charge along the diving board: "Somebody had better look out." After the disaster, he says in a very, very loud voice: "I told you so!"

—M. M.

BY MIKE TOMKIES

Nimble, swift and fearless,
this tiny creature
has earned the greatest
title among birds



I HAVE heard crofters on winter evenings in the Scottish Highlands tell a wonderful story about a wren. Once long ago, all the birds gathered in a glen and agreed that the one who flew highest would be their king. Naturally, the golden eagle was sure he would win. The tiny wren, though, dumbfounded them all by challenging the eagle.

Up went the mighty bird of prey, soaring out of sight. But the wren had secretly perched on the eagle's back and, being fresh, he flew even higher. And that was how the wren became King of Birds.

Such legendary tales, common throughout Europe, are not surprising. The wren makes up in pluck what he lacks in size. One of nature's interesting sights is a wren tackling an owl. In his book *The Wren*, Edward Armstrong, Britain's leading authority on the bird, recalls how a sudden commotion one morning led him to a Scots pine. A brown owl had settled on an upper branch and, blinking sleepily in the daylight, was enduring the loud protests of blackbirds and chaffinches. None dared go closer than a few metres—except a wren, his stumpy tail cocked so high it nearly touched his back.

Rattling out his indignant notes like a miniature machine-gun, he pirouetted up through the leaves, flipping his wings and showing his downy thighs until he was hurling insults a mere few cms. from the

owl's sleepy face. The poor owl, for whom a wren would be less than a gulp, more feathers than flesh, endured without comment and, when the rabble had at last calmed down, floated away on silent wings.

The wren's commonest nickname, applied to both sexes since they are alike in plumage, is Jenny Wren. They are surprisingly determined and often, like many other small creatures, they act as if they had something to prove. They give the impression of being cocky. No wonder when the wren's portrait decorated farthing coins during the Second World War, it seemed a symbol of British defiance.

Only the most northerly wrens are migratory. Others stay put in winter. They do not flock in winter woods like long-tailed tits and many finches, but go their own hard way. They rarely visit bird tables and are impossible to tame.

Just occasionally in winter they come into houses looking for titbits like hibernating butterflies. But, notes Edward Armstrong, unless they are surprised too abruptly they won't buffet themselves against the window trying to escape as other birds will. Wrens' eyes are astonishingly sharp. Specially developed for probing close for insects in thick undergrowth, they can see minute specks of dust on the glass. When they feel trapped they creep about, hiding under furniture.

The wren relies on his brown camouflage, agility, swift flight and

alert eyes to keep him out of trouble and sings to defend his territory—about half a hectare in dense, food-filled woodland, larger in bleaker habitats such as Scottish hillsides. If he hears another male on his territory, he sings and then makes "threat displays" of upraised wings and spread tail.

Spring Awakening. It is in March that the wren seeks a wife, or—if he is mature and vigorous, and his terrain is rich with insect food—more than one wife: one male in a Kent wood was found to have had six laying wives during a breeding season. But first he has to work hard, building homes.

From pre-dawn to dusk he flits through his territory, finding nesting sites in thick bushes, hollow trees, nooks in walls, even the pockets of scarecrows. Once I found a wren's nest ingeniously constructed close to a waterfall. The nest was perfectly dry inside. Its domed roof of tightly woven grass deflected any stray drops of water.

One spring day when he flies at yet another wren he spies in the undergrowth, the intruder does not flee, sing back or show fight. Instead, the new bird persists, coming forward quietly. By her modest manner alone—since both sexes look similar—does the female make herself known as a potential wife.

Now the male drops his belligerent attitude and becomes the wooer. He sings more softly, warbling his

sweet courtship songs; quivering his wings before her and raising them so that the sun gives a beautiful diaphanous look to his feathers. Pausing at the entrance to one of his nests, he proudly flutters his wings and displays his ruddy tail coverts. She follows cautiously, then finally chooses a nest and examines it to test its suitability. During her one-week gestation period, she lines the nest with hair or feathers.

Mrs Wren lays her first clutch of eggs—usually about six, white with red-brown markings—around late April. She incubates them alone, while Mr Wren smartens his other nests where he may take his first youngsters to roost when she incubates her second brood, which can be as late as August.

The young hatch after about two weeks. Some 16 days later they leave the nest, usually one by one; but if a predator disturbs them, they all leave at once in a sudden, fluttering explosion.

Happy Families. A wren family is a poignant, beautiful sight as the young huddle together. They keep in touch with their parents with calls so high-pitched that neither human ear nor four-footed predator can easily detect the chicks' location.

A wren's song has been measured at a frequency as high as 9,300 cycles a second; its average is around 4,500 cycles, the highest note of the piano. Edward Armstrong recalls hearing a wren singing nearly a kilometre away in the Scottish islands. Even

though the bird might have been perched near a reflecting cliff, it was hard to believe such a volume of sound came from so tiny a throat. And not only volume: "There are more notes than the human ear is capable of discriminating," says Armstrong. Often the wren sings its notes so fast (30 a second) that the human ear can only catch them all when the song is played back slowly on a tape recorder.

Language Barrier. Wrens have a considerable vocabulary. If a prowling cat, dog or stoat appears, off goes the wren to "mob" it, whirring misty wings in the bushes above with high reeling *kree* notes as if to say, "Look out, there's trouble below." When another wren enters his territory, the male sings against him and utters calls of intimidation. Very occasionally, males attack one another and tumble about, gripped together by their claws.

Writers as diverse as Aristotle, Shakespeare and Wordsworth have included the wren in their works. Nicknamed "Robbie cuddie" or "brown button" by Shetlanders, it is called "stumpy" in Cheshire and Lancashire, and "titty todger" in Devon.

Wrens are among the few European birds which invaded the Old World from the New. Long ago when the ice melted and the northern climate grew warmer, their ancestors are thought to have crossed to Asia in the region of the Bering Straits, between Alaska and

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Russia. Their descendants invaded other parts of Asia and, eventually, Europe.

Wrens belong to the family *Troglodytidae*, of which there are 63 known species. In the Old World the *Troglodytes troglodytes*, which is known as the Winter Wren in North America, is the only representative. It breeds in most of the northern hemisphere — the USA, lower and central Canada, and from Turkey across the Himalayas to China, Mongolia and eastern Russia. It is also found in north-west Africa.

Contrary to popular belief, at nine and a half centimetres the wren is not Britain's smallest bird; both the Goldcrest and Firecrest are half a centimetre smaller. But the wren is a more adaptable character, even colonizing the harsh, rugged islands of St. Kilda, Fair Isle, Shetland and the Outer Hebrides, where it has evolved distinct sub-species with slightly larger beaks, feet and wings. Sir Julian Huxley pointed out that wrens' wings increased one per cent in length for each half degree in latitude north.

In 1884, when the bigger and more strongly marked St. Kilda wren was discovered as a new sub-species (*Troglodytes troglodytes hirtensis*), collectors persecuted the bird so much that an Act of Parliament was passed for its protection in 1904.

Inevitably perhaps, wrens suffer huge losses in severe winters. The smaller the bird, the bigger its surface ratio to body weight and the quicker it loses heat. But although the harsh winter of 1962-63 destroyed three-quarters of Britain's wrens, today probably only the skylark and the crow are more widespread in Britain.

We can all learn lessons from the world of nature, and I well remember one bitter February morning in my shepherd's cottage in the Highlands. I was struggling to write a long book and had lost heart. High north winds had driven snow blizzards over everything, I had run out of dry firewood, and was tempted to head for warmer climes. Then I looked out of the window.

Plucky Example. Creeping industriously through the foliage when most other small birds had gone south, was a wren. Like a mouse with wings it was searching ceaselessly for seeds and insects between snow-heavy tufts of grass and stubs of golden bracken. It refused to give up. That decided me. If the tiny wren could take the awful weather, I could too. I went back to my work.

Today, the book is about to be published, and whenever I see tiny Jenny Wren foraging zealously, I give heartfelt thanks for its salutary lesson in courage.

A WORRIED-LOOKING young wife entered a butcher's shop in Rome and asked the owner in a trembling voice, "Please give me something that doesn't burn."

— *Tempo*, Italy

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New and Deadly Findings About Marijuana

By Dr. D. HARVEY POWELSON

A psychiatrist who once supported the drug's legalization explains why he is now utterly opposed

LEGALIZE POT. That was the headline in our university newspaper on April 12, 1967. "Marijuana is harmless," the article quoted me as saying. "There is no evidence that it does anything except make people feel good. It has never made anyone into a criminal or a narcotics addict. It should be legalized."

At the time I made those remarks, I was chief of the Department of Psychiatry in the Student Health Centre at the University of California, Berkeley, and deeply involved in the debate over hallucinogens and "mind-expanding" drugs. LSD and mescaline, I thought, were very dangerous. But marijuana was different. I had tried it twice—once in the 1950s and again in

the early 1960s—without noticing any ill effects. I had read the medical literature which, although sparse and out of date, indicated that it was non-addictive and produced no harmful effects.

Within five years I knew I was totally wrong. What caused me to change my mind? It was the consequence of observing some 200 students who had come to me for help.

The catalyst was a 24-year-old student named Mike whom my wife Joan, a psychiatric social worker, and I treated privately. Mike was a bright and agile young man who was taking his law degree and Ph.D. simultaneously, and was working towards his pilot's licence. He had just begun smoking marijuana that

year. I'd known Mike previously, but now he wanted to see me professionally.

He told us that he had come to realize that he had only acquaintances and no friends. In therapy sessions, we noted that Mike's thinking often became cloudy and unreal. At such times, however, he was certain that he was thinking with more clarity and insight than usual.

"I feel that everyone is my friend," he observed one day.

"Do you mean criminals are your friends? Can you trust everybody?"

"Yes, I can trust everybody," Mike said.

Suspicion Begins. One afternoon, as we were walking back to our house, Joan was thinking out loud about our session with him. I said, "It sounds like organic brain damage." "He was at a pot party three days ago," Joan mused. It seemed unlikely that there was a connection.

At that time, there was no medical evidence that marijuana affected, or remained in, the brain; but after more observation it became clear to us that the times when Mike had the most trouble in thinking clearly always followed the times when he had smoked marijuana or hashish (a more concentrated form of marijuana). We told Mike we thought there was a connection, and asked him to stop smoking marijuana, as an experiment. It was obvious that such an experiment would not hurt

him, yet his reaction was hostile; he was not going to stop.

As he became more involved with marijuana, both his gullibility with others and his hostile suspicion of us were aggravated with each use of pot. Meanwhile, he was having trouble concentrating on his studies and couldn't finish his work. Six months later, Mike was piloting a small plane which crashed, killing him and two companions.

Losing Touch. An inability to think logically, a tendency to speak in clichés and generalities, a temporary loss of memory — these were the symptoms Mike had displayed after using marijuana. Would we find them in other patients as well? It didn't take us long to conclude that there was a definite correlation. The patients who used pot told us that it heightened their "awareness" of particular experiences and made them feel mellow and peaceful, with real insights about the world. These self-observations were simply not true. They were part of what we have come to recognize as the marijuana illusion.

What they didn't tell us—because they didn't know—was that even small amounts of marijuana interfered with the sense of time and with memory storage. They didn't realize that they were becoming less adequate in areas where judgement, clarity, memory and reasoning are necessary. They couldn't see that their own pathological forms of

thinking were becoming more entrenched and that they were becoming paranoid. Heavy users lost their will to do anything sustained, and all users became vulnerable to the lures of easy solutions to personal and social problems. For many, the search for highs meant other hard drugs.

John, a young graduate, was typical of many patients who used marijuana every day. He couldn't sleep regular hours and had trouble concentrating. He spoke in all the current clichés and was unable to focus his attention. He had followed me out of a lecture where I had talked about marijuana. He came to see us regularly to argue about pot. It was a year before he gave it up. But the effects of smoking so much marijuana over so long a period remained. Even today, John has to focus his attention consciously before he can do what other people do spontaneously.

A sensitive female student named Helen told us that she smoked "only" two or three joints a month. But every time she lit up, she heard voices. On several occasions she had to go into hospital. After months of treatment she regained self-control, but every time she shared a joint she began to have her old symptoms. Her reaction—disturbing because it was so extreme—was not typical. But it served as a necessary reminder that, with marijuana, as with all mind-altering drugs, it is impossible to predict the effects on users.

Tom, a graduate, was conscripted into the Army, but got out by pretending to be crazy. He came to us wondering if indeed it had been an act. He had used so much marijuana that he didn't know. Like all marijuana users, he was totally unable to evaluate a person's character.

Normally shy and reserved, Tom had become promiscuous, and was constantly involved with emotionally disturbed women. In the process of therapy he learned for himself that he could not smoke marijuana. The withdrawal process lasted two years, but today he is totally involved in running his own flourishing business.

The chronic heavy use of marijuana, we found, leads to a deterioration of bodily functions that is difficult, sometimes impossible, to reverse. Heavy pot smokers lose their normal appetite. They have trouble sleeping regular hours. They can become sexually impotent.

Mind-Bending. Even more serious is the seemingly permanent loss of mental ability. Consider Steve, an athletic young man who had obtained a degree in mathematics and then gone on to do post-graduate work in philosophy.

Soon after he started the daily use of hashish, he dropped out of university and did nothing for 18 months. When he discovered that the drug affected his athletic timing, he gave it up and returned to Berkeley to study for his Ph.D. But the effects remained. He told

me that he could no longer handle mathematics at his prior level. He simply couldn't follow the arguments any more. Today, three and a half years later, he still cannot. He is convinced that the change is permanent and that it was drug-induced.

By the spring of 1970, I had seen more than 1,000 patients. I could no longer avoid the conclusion that my first opinion of pot was wrong, and publicly said so. Subsequently, medical research groups, after a generation of neglect, began to attribute long-range ill effects to the use of pot.

Their studies have produced evidence that cannabis—both hashish and marijuana—interferes with the body's production of DNA, weakening immunity to disease by damaging white blood cells, that in males it reduces levels of testosterone, sometimes to the point of sterility, and that it brings about cancerous alterations in lung tissue. As a result of these findings and my own, I now believe that marijuana is the most dangerous drug we

have to contend with today for these reasons.

- *Its early use is beguiling.* Pot smokers are so enraptured by the *illusion* of warm feelings that they are unable to sense the deterioration of their own mental and physiological processes.

- *Its continued use leads to delusional thinking.* And along with the delusions comes the strong need to seduce others into using drugs. I have rarely seen a regular marijuana user who didn't actively attempt to influence friends to use the drug.

Considering proposals to legalize marijuana is a mistake. There is *no* argument *for* marijuana. Rationalizations such as "society is sick," "everybody else does it," "the laws are hypocritical," "it's no worse than alcohol, tobacco, etc.," are smoke screens.

If marijuana were to be legalized, or the penalties for use and possession removed, hundreds of young people who have so far refrained would be tempted to experiment. And many would suffer serious consequences.

After-thoughts

"COME to our amateur pop-music-group contest," urged a school poster. A not-so-anxious pupil pencilled at the bottom: "A fate worse than deaf."

—Twin Circle

ON A poster advertising a talk on "what to do if you are going bald," someone wrote: "Prepare to meet thy dome."

—C P

A NOTICE at Chicago's Lincoln Park Zoo advises: "Claim lost children at lion house." Someone added: "Before feeding time."

—*The Chicagoan*

A Little Something for the Wife

By THOMAS BOLTON

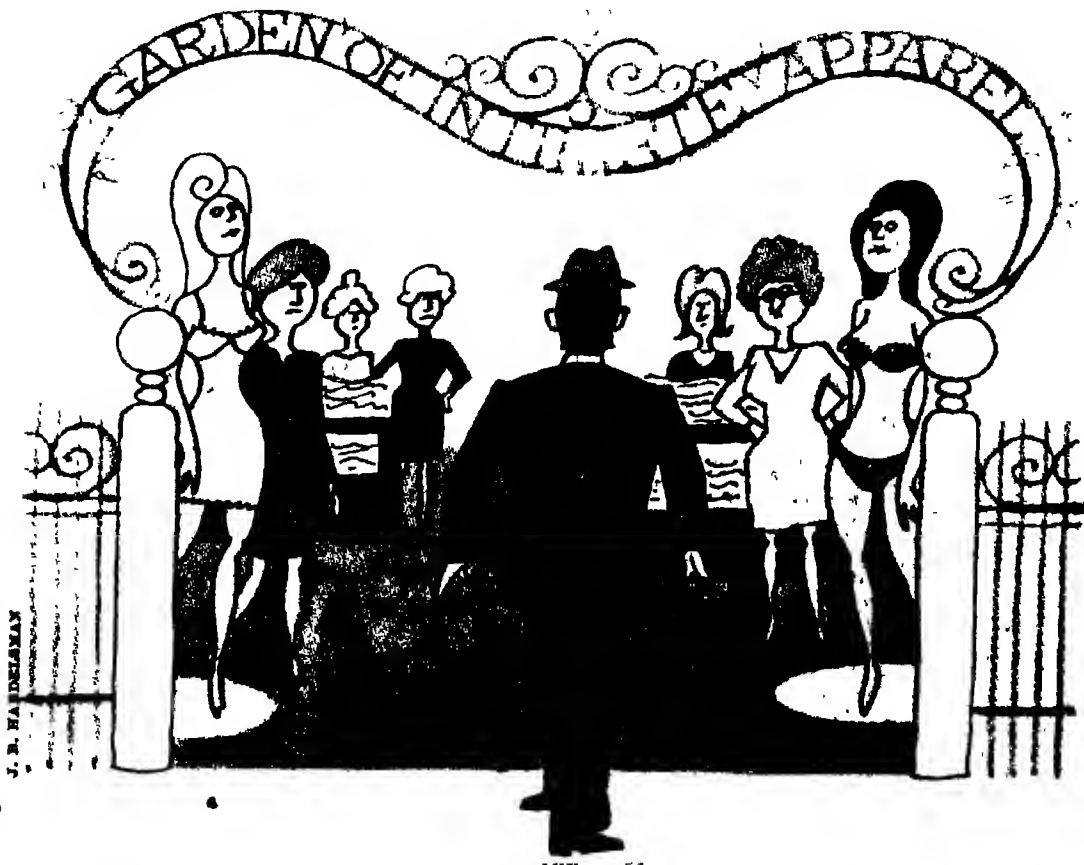
ALTHOUGH I may not know much about women, I do know this: you do not give your wife a dustbin rubbish compactor for your anniversary. I made this discovery fairly recently, 12 years after taking the vows, when I presented Liz with a de luxe King Squeeze 'Em Rubbish Compactor.

It came in a large box, which I wrestled into the kitchen and camouflaged with tissue paper and

a big red bow. I brought out a bottle of champagne and summoned Liz. "Happy anniversary, sweetheart!" I said, grinning.

Liz regarded the box a bit uncertainly. "It's so *big*," she said. "I'd be happy with a new table-cloth."

She carefully unwrapped the box. There was soon no mystery about the surprise within, since the box was not only embellished with the words King Squeeze 'Em Rubbish



Compactor but also bore a four-colour rendition of the contraption in action.

"The best there is," I said. "Imagine—it can turn three dustbins of rubbish into one neat bag in less than a minute."

Liz's lower lip began to tremble, and a tear gently swelled at the corner of each fair eye. Before I could point out King Squeeze Em's advantages, she had pirouetted and fled.

FORTUNATELY, I had a second chance: Liz's birthday was two weeks away. I decided I had better buy her something with the personal appeal that a rubbish compactor evidently lacked. Clothing might be just the answer: a dress, say, or a trouser suit. Of course, the last apparel I had purchased with a female in mind had been a box of nappies for the baby, and even then I had got the size wrong.

Nevertheless, during my lunch hour one day I headed with confident step towards the evening-dress department of La Maison de Chic. In my hand was clutched an advertisement I had seen in that day's paper.

The assistant who glided forward as I entered the scented portals of La Maison was tall and frosty-grey, an aristocratic icicle who appeared to be profoundly offended by the figure now approaching her. "Good day," I said, giving her just a glint of a Robert Redford smile to loosen

her up. "I'm looking for something in a dress." It didn't sound quite right, the way I said it.

"Perhaps *monsieur* should try our Casual Shop," she said in the kind of voice that would be handy to have around in case one's refrigerator was ever out of order. "The gowns here are all quite expensive."

So that was her game. Well, I was prepared to wager for rather high stakes myself. "My good woman," I said coolly, "cost is irrelevant. Do you or do you not have this green hostess dress, which is fresh and pretty against bare skin and good company at small dinners?" I thrust the advertisement at her.

"Of course, *monsieur*, we have it. The price is on the label."

I looked, and gulped.

"*Monsieur* will find the Casual Shop on the third floor."

THE Casual Shop was guarded by a little bombshell who sat transfixed before a paperback propped against a cash register. "Look," I said, "I'd like to buy a dress. A green dress." Green was Liz's favourite colour.

"Size, sir?"

Unfortunately, the question of size was not one that I had given proper thought to, but the girl's topography struck me as a reasonable facsimile of Liz's. I reached out and grasped her shoulders appraisingly. "She's just about the same width as you are. What would *you* want for a birthday?"

"Well," she said thoughtfully, "if

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you want to know the truth, I wouldn't want a dress. No, I'd prefer lingerie."

A lady cruising past caught this last remark and turned to see my hands parked on the soft shoulders. I snatched them away as from a hot stove. "Good afternoon, Thomas," she said and, with a skyward heave of eyebrows, stalked away.

"Mrs Witherspoon," I whispered hoarsely. "The minister's wife."

"She'd say the same, sir. Try lingerie. The girlfriend will love it."

I FOUND myself walking numbly beneath an arch entwined with hearts and bearing the sign Garden of Intimate Apparel. It was an extraordinarily unnerving place to be. Long-tressed, near-naked mannequins rose on all sides; frothy *peignoirs* bloomed like exotic flowers amid stacks of mysterious underthings. It all looked like one of King Farouk's day-dreams to me.

A large female with steely eyes and mousetrap mouth blocked my path. "May I help you?"

"No, thanks," I managed. "I'm just looking."

She turned to a compatriot, and I heard her murmur, "This may be a case for the manager."

"No—no need! A good day to you, ladies." So saying, I slunk

briskly away, which is not easy.

In ten minutes I would have to be back at work. So I returned to Miss Soft Shoulders in Casual and said, in a voice of purest desperation, "What can you sell me that is green and can be worn by a woman of approximately your dimensions that doesn't come in *sizes*?"

She didn't hesitate. "A wrap-around skirt," she said.

A FEW evenings later, I handed Liz a gaily wrapped box and said, "Happy birthday, darling!"

She lifted it, and smiled—it couldn't possibly be a King Squeeze 'Em. Off came the paper and she held up the skirt, and then gift-wrapped my neck with two lovely arms. "*Darling*. I'll use it tonight."

When I came down to a candlelit dinner, our best china glistened on a new green table-cloth—a table-cloth that looked strangely familiar.

"Look how it sets off the silver," smiled Liz. "You're so clever! It's a funny shape, though. I think it's one of those new Danish designs."

"Well," I said, "you could always make a skirt out of it."

"That's not a bad idea. Looks as if I married a man with an eye for clothes."

"That's me," I sighed. "In a nutshell."

Pedal Pusher

A FELLOW was seen pedalling his bicycle round town displaying a short pollution message for the fast cars that passed him: "I burn only cholesterol."

—*Funny Funny World*

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Infiltrating even the highest echelons of government, communist agents in West Germany wage constant secret war

Spy Centre of the Western World

By JOHN DORNBERG

At 6.30 on the chilly, drizzly morning of April 24, 1974, a fleet of black cars drew up at a block of flats in a quiet street of Bad Godesberg, diplomatic suburb of Bonn. Nine men—West German secret-service agents—leaped out of the cars, ran up the stairs to the second floor and rang the bell.

A stocky man with gold-rimmed glasses, his paunchy frame wrapped in a dressing-gown, opened the door. "Yes?"

"Herr Günter Guillaume?" asked one of the agents.

The stocky man nodded.

"*Sie sind verhaftet*—you are under arrest."

Later, as one of the officials moved to handcuff him, Guillaume waved him away. "That will not be necessary," he said indignantly.

"Please respect my honour as an officer and a gentleman. I am a captain in the East German National People's Army."

Thus ended the most spectacular spying career in recent history. Thirteen days later, West German Chancellor Willy Brandt resigned. The communist spy was thus directly responsible for tremors that spread throughout the Common Market, the North Atlantic Alliance and, ultimately, the world.

As one of Brandt's three personal assistants, Guillaume had been solidly ensconced in the presidential Schaumburg Palais. At his fingertips were many Chancellory files and the communications of national leaders throughout Europe, including Harold Wilson. He was privy to top secrets, and to the

day-to-day unwritten confidences between the ruling men of the country. Did Guillaume exploit his intimacy with Brandt in any way to affect the thinking and actions of the Chancellor, and hence the course of West German policy? There is still no definitive answer.

Tip of the Iceberg. As a communist spy in West Germany, Guillaume was well placed. Yet, behind him lurked legions of lesser operatives, giving the Federal Republic of West Germany the dubious distinction of being the Western world's premier espionage target.

During the past two decades, Bonn's counter-intelligence services have recorded 35,000 individual attempts by Eastern countries to recruit West German agents. The government estimates that some 11,000 communist agents currently operate on its territory. "The cold war may have decelerated," says a Bonn official, "but the secret war has just changed up into second gear."

With a 1,347-km. border dividing it from East Germany, and a 357-km. border with Czechoslovakia, West Germany is the frontline outpost of the Western Alliance, the territory with the highest concentration of crack Nato forces, and the most sophisticated weaponry. A vital intelligence target, it could also be a candidate for Soviet-inspired subversion. The long, direct border provides Eastern operatives easy access, and the fact that East

Germans share the same language minimizes the risk of their detection. Indeed, only some 400 agents are "neutralized" every year.

Recent relaxation of travel regulations between West and East Germany provides communist intelligence services with even better opportunities to recruit and insert potential agents. Moreover, catching spies is expensive. For more than a year, 40 security agents worked full time shadowing Guillaume, trying to decode the ciphered radio instructions he received, tapping his phone conversations. In early April 1974, when he took a two-week holiday in the south of France to meet his East German guidance and control officer, 100 extra agents had to be assigned to the case.

Loopholes. Experts offer many reasons for the success of spies of such calibre. Laxity and inefficiency are foremost, often due to the proliferation of counter-intelligence agencies, with little co-ordination among them. For instance, Guillaume was on one agency's list of suspects in 1954, and was checked by another two years later. Yet, neither report surfaced when he passed two security clearances in 1970.

The roster of communist spies neutralized since the Federal Republic was founded in 1949, does include, besides the usual run of military servicemen, government secretaries, foreign office code clerks or caretakers in foreign embassies, some very important people. There

was, for instance, Otto John, head of the Office for Protection of the Constitution, the West German state security service; Hannsheinz Porst, a millionaire businessman; Wilhelm Gronau, a top trade-union official; and no less than four members of parliament. One, Alfred Frenzel, was a member of the *Bundestag*'s armed services committee until caught spying for Czechoslovakia.

Double Cross. Heinz Felte, a former SS officer, served in a key position in West Germany's ultra-secret Federal Intelligence Service. His job: to supervise counter-espionage against the Soviet Union. Actually he was a Soviet agent, and during a ten-year period supplied the KGB with 15,000 photographs of documents.

Weak security is part of the picture. It was plain laxity that enabled one team of spies—Wolf Knoppe, a *Luftwaffe* Starfighter pilot, Josef Linowsky, a Polish-born locksmith, and Manfred Ramminger, an architect—to steal a 2.7-metre, 70-kilogram Sidewinder missile from a West German Nato air base in 1967.

The base was guarded only by civilians, mostly pensioners, and dogs. The dogs had been locked up on the night of the theft, because poisoned meat had been put out to rid the base of rats. Knoppe and Linowsky got the rocket, wheeled it boldly across the runway in a handcart and loaded it into Ramminger's car. The Sidewinder, wrapped in a rug and sticking out of the back

window, was taken to the architect's garage, dismantled and air-freighted direct to Moscow as "machinery parts."

In this case, the three were eventually arrested and sentenced to prison terms. Yet, for the last three years, convictions for spying have averaged a mere 42 annually, and sentences have been light. The stiffest ever meted out—in 1961—was 15 years for *Bundestag* deputy Alfred Frenzel. Even so, five years later he was released to Czechoslovakia in exchange for four West Germans arrested in Eastern Europe. The KGB's Heinz Felte was sentenced to 14 years, but then exchanged for 21 West Germans held by the East.

Meanwhile the "legals," or agents in diplomatic clothing, run virtually no risk of punishment. Of 216 Soviet diplomats in West Germany, up to 40 per cent are suspected of working for the KGB or for GRU, the Soviet military intelligence agency. The worst that can happen to them is expulsion. Yet of the 25 Soviet diplomats, commercial attachés and journalists exposed as spies since 1957, not one has been formally declared *persona non grata*. Instead, they are given "signals" to show they have been identified and might as well go home.

East German agents in the West usually receive ciphered instructions over short-wave radio at predetermined broadcast times. The spies are equipped with cellulose

cipher scrolls for decoding the five-digit numbers that a metallic-voiced woman reads out at intervals over the 49-metre wavelength at varying times of day or night. These transmissions have been going on for some 20 years, and even when West German security has succeeded in breaking the code, it has proved of no use. Ciphers change very frequently and each agent has his own.

King Pin. The spy-master for most of the agents operating in West Germany is 51-year-old Lieutenant-General Markus "Mischa" Wolf, deputy head of East Germany's Ministry for State Security (MFS). Those who know Wolf call him "very bright," "urbane," and also "patient." His left-wing father left Stuttgart and fled with his family to Russia when Hitler came to power in 1933 and Mischa was ten.

There, in the Comintern school at Kushnarenkovo, the boy was trained for a conspiratorial future. In Germany's Soviet Zone in 1945, Wolf started out as a radio commentator, then became a diplomat and, in 1951, aged 28, East Germany's intelligence chief.

A classic Wolf operation was the case of Heinrich Wiedemann, a judge and later deputy minister in the Department of Justice of the state of North Rhine-Westphalia. Dismissed in 1948 for minor irregularities, he took revenge by working for Mischa Wolf and was his top man in Bonn for the next two decades. There, with East German

capital, he set up a finance and credit service for government employees, offering low-interest rates and long-term repayment. Copies of loan applications were dispatched to East Berlin to provide the MFS with a growing file of Bonn civil servants in financial straits and therefore susceptible to pressure.

Wiedemann also recruited an old friend, widowed Irene Schultz, as an MFS agent. In 1957, using his government connections, Wiedemann got her a job as a secretary in Bonn's Ministry of the Interior. For five years she took home copies of its classified documents, then passed them to another woman agent for microfilming and transmission to East Berlin. Transferred to the crucial Ministry of Science, in 1965 she became secretary to the minister, and over the next five years supplied Wolf's agency with every word uttered in cabinet sessions, straight from the minutes. Only in February 1970 was she exposed and arrested.

Office Politics. Meanwhile another of Wolf's operatives was in action: attractive Gerda Schröter, now 30, for years a clerk in the West German foreign office's code section. She was recruited at the age of 19, while working in Paris as an *au pair* girl, by her lover and future husband, Herbert Schröter—an MFS professional, 17 years her senior.

For seven years this pair gathered material, dispatched three times a

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week to the MFS by leaving it above a water cistern on the night train between Cologne and East Berlin. In May 1973 Gerda, her marriage breaking up, decided to turn herself in to West German authorities. But she did inform her husband just before, and he promptly disappeared to East Berlin.

"The old Mata Hari story of the seductive lady spy no longer applies," a Bonn counter-intelligence expert told me. "Nowadays, it is attentive men who try to turn typists and secretaries into agents. Our greatest security risks are Bonn's 20,000 government girls."

Point of Sale. Extortion and blackmail remain the most common ways of recruiting. But at times, Mischa Wolf will try anything to unearth potential spies. Several years ago he went into direct mail. East Berlin-based "study" and "opinion research" groups sent out questionnaires for "contests"—with names like Futura 2000 and Universal-70—to commercial West German mailing lists, offering handsome prizes (to be collected in East Germany) for the "right" answers.

The basic aim is to establish contact and embroil the prospect in a dialogue. The second step is to obtain a promise to deliver some material—no matter how innocuous or unimportant, or under what guise it is requested. The target individual may then get used to delivering

anything requested of him. Or he may be made to realize he has become entangled with an espionage service, and from fear of exposure will agree to continue co-operating.

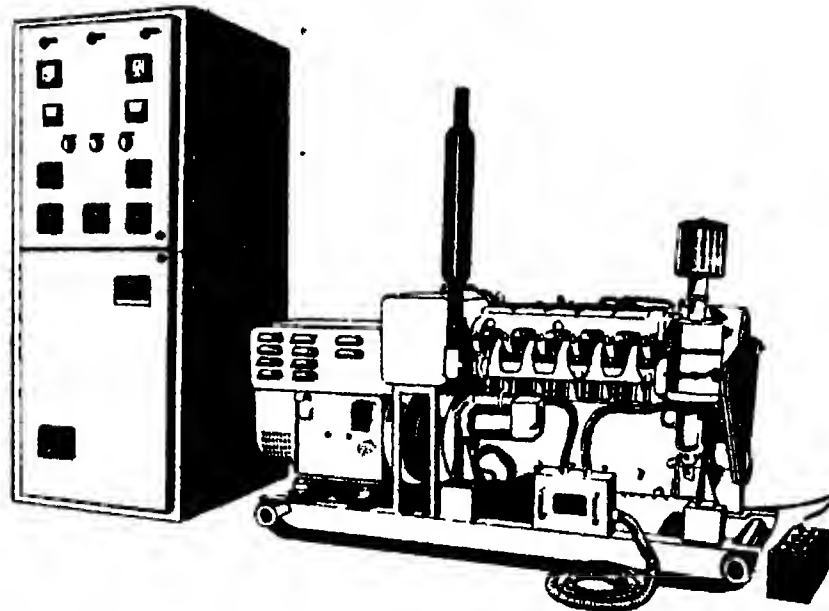
The MFS relies heavily on "sleepers"—agents inserted into West German society years ago with instructions to legitimize themselves as West German citizens and prepare to do high-level espionage work at some future date. Mischa Wolf is believed to have infiltrated hundreds of such agents into West Germany during the 1950s. Of these, only a fraction have been caught or identified, the most successful so far being Günter Guillaume. "There are many more Guilllaumes," warns Günther Nollau, present head of West Germany's Office for the Protection of the Constitution.

For years the West German republic remained complacent. Only partly has the Guillaume case changed that. Many people still believe that, with the cold war virtually over, the end of large-scale spying and subversion is at hand. Yet the official East German daily newspaper states that there is "no contradiction whatsoever" between détente and continuing espionage. "Nothing in the treaty between the two German states would require the abolition of intelligence activity by either side."

Thus, notice is served: the secret war will continue.

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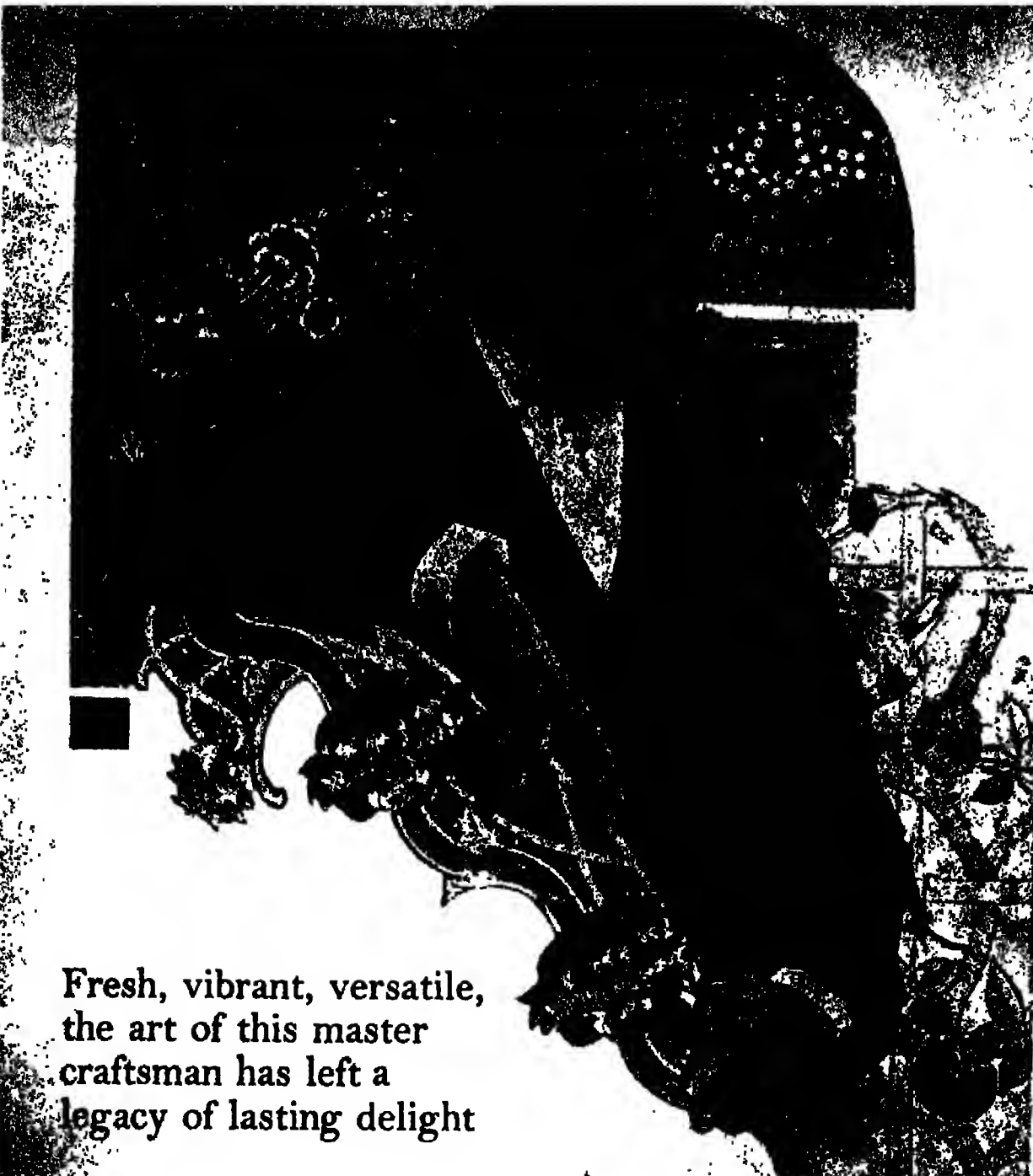


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William Morris— Designer for Today

JOHN GRIFFIN

HE was a giant of an artist, a Victorian who produced glorious designs as timeless as the trees which so often inspired his patterns. His graceful swirls, tendrils and blossoms today adorn floors, furniture, windows and books. His wallpapers and fabrics, still best-sellers, enhance London's Coliseum Theatre, Brown's Hotel and the National Portrait Gallery.

William Morris was a jack—and master—of all trades. Moreover, he relished tackling several at once. Callers often discovered him simultaneously writing a lecture, composing a poem, making a design, working at a tapestry loom and throwing out instructions to his secretary. Declared Morris, "If a chap can't compose an epic poem while he's weaving tapestry . . . he'll never do any good at all."

Whatever Morris did, he did superbly. His achievements include more than 500 patterns for textiles, carpets, tapestries and wallpapers; planning 53 books for his press and more than 500 stained-glass windows, the authorship of 19 volumes of prose, poetry and lectures.

This would have been enough for most men; it established him as a supremely important figure in the history of the decorative arts. But there was another side to Morris. Deeply concerned with bettering society, he strove to alter social attitudes, to improve conditions for the ordinary worker, to combat pollution and ugliness, to prevent the

wanton destruction of beautiful old buildings. Asa Briggs, Vice-Chancellor of Sussex University, has written of him: "He was an angry young man and an angry old man, but he always knew what he was angry about. He hated both squalor and shoddiness, dullness and display, the tastelessness of the middle classes and the exploitation of the poor."

Morris was powerfully built, with a proud, handsome face, quick, hazel eyes, and a wild, reddish-brown beard and mane. At a time when the average man of fashion spent three-quarters of an hour doing his morning toilet, he never shaved or wore a tie if he could help it.

Yet for all his untidiness, he had the confident air of a conqueror. His friend and fellow-designer Edward Burne-Jones said of him, "Nothing like him ever was or will be," and described him as "a rock of defence to us all, and a castle on the top of it, and a banner on top of that!"

This restless energy overflowed so copiously that Morris could seldom sit still. He would rise at 5.30 a.m. to work at the tapestry loom in his bedroom, happy among his bobbins of brilliantly coloured silk or wool. By the time the rest of the household was awake he had already done what would have been half a day's work for an ordinary man. Even at meals, he paced up and down the dining-room like a

caged lion, sometimes angrily twisting a fork between his teeth.

Morris's simple goodness and intense, lovable nature won him an ever-widening circle of brilliant, devoted companions, including Swinburne, W. B. Yeats and George Bernard Shaw—that most irreverent cynic—who was moved to describe him as a prophet and a saint. Although such an indefatigable worker, Morris was always ready to join his friends in fishing, fencing, bowls, indoor games and, above all, good talk. His company had the bracing, buffeting vigour of a sea breeze. Yeats wrote, "I discovered his spontaneity and joy and made him my chief of men . . . a man more joyous than any intellectual man of our world."

Eldest son of a wealthy businessman, William Morris was born on March 24, 1834, at Walthamstow—then just a village, close to Epping Forest. At the age of eight he was taken to see Canterbury Cathedral, whose magnificent architecture brought him a spiritual and aesthetic revelation which shaped the rest of his life.

"I remember thinking," he said later, "that the gates of Heaven had been opened to me." His decision to study theology at Oxford, his love of architecture, his devotion to fine craftsmanship, all were inspired by that unforgettable visit.

Whereas many men have to overcome the obstacles of poverty, Morris fought the indolence and lack of

incentive that can go with comfort and wealth. In 1856, spurred by a tour of the cathedrals of northern France and the belief that a designer should lavish "treasures of human hope and thought on everything that was made, from a cathedral to a porridge pot," he started to train as an architect. Later that year, influenced by the leading Pre-Raphaelite artist Dante Gabriel Rossetti, he abandoned architecture to take up painting.

Through Rossetti, Morris met an ethereally beautiful girl who had agreed to sit for them; Jane Burden, daughter of an Oxford livery-stable keeper. But when he began to paint her, he was so overwhelmed by her extraordinary other-worldliness that his brush faltered in his hand. He is said to have scribbled on the canvas and turned it round for Janey to see. He had written, "I cannot paint you, but I love you."

Eventually Morris managed to paint Janey; his portrait of her, as Queen Guenevere, now hangs in the Tate Gallery. In 1859 they married, and moved into the Red House at Upton, Kent, to set about making it "the beautifullest place on earth."

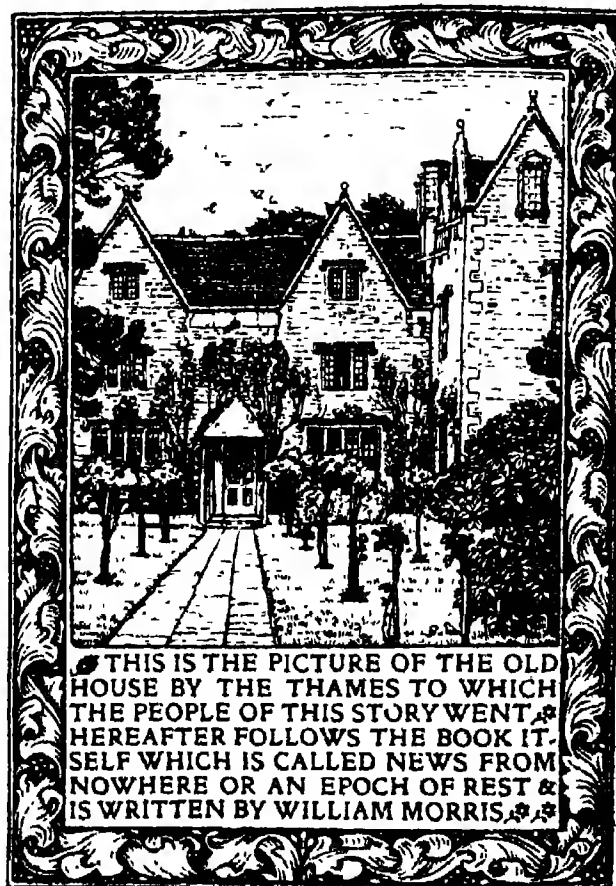
Morris detested what he regarded as the useless clutter which filled Victorian rooms. "Have nothing in your houses that you do not know to be useful, or believe to be beautiful," he urged. Unable to buy the furnishings he wanted, he decided to design and make his own. With

a group of enthusiastic friends, he established a decorating firm, which existed until 1940. According to art historian Sir Nikolaus Pevsner, its founding marked "the beginning of a new era in Western Art." Morris and his friends threw themselves into creating carvings, tiles, furniture and wall decorations.

They also created exquisite stained-glass windows for churches in almost every English county, using nearly forgotten medieval techniques so successfully that Victorian critics thought the glass too good to be true. At the International Exhibition in 1862, rivals tried to have it disqualified, believing it was retouched medieval glass. Some of the designs were given extra liveliness by the group's habit of using their own and their friends' likenesses; in a window at St. Martin's, Scarborough, Morris is dropping a stone on a bailiff from an upper storey.

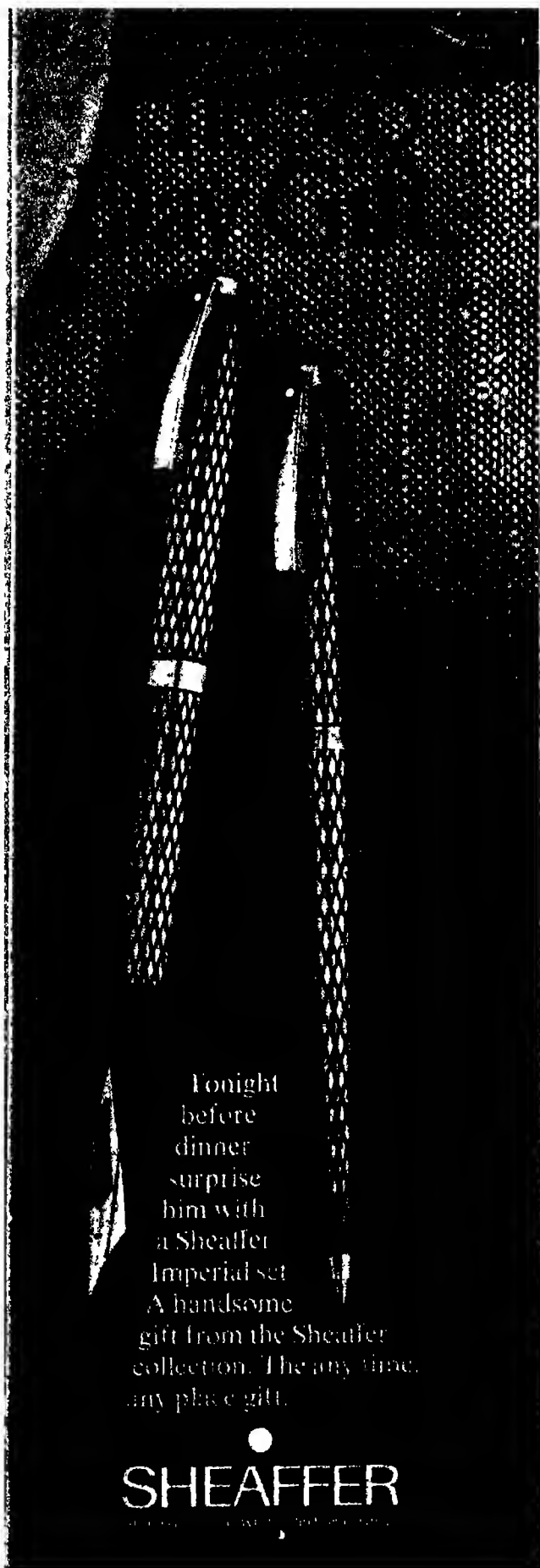
Next, Morris turned to fabric design, and pioneered a revival of the ancient art of vegetable dyeing, spending hours experimenting at vats he set up in his scullery. In a Victorian age of unsubtle tones, the purity of Morris's vegetable colours were at first unfashionable. When one of his clients commented on their clarity, Morris retorted, "If you want dirt, you can find that in the street." His dye-workings resulted in a series of enchanting chintzes, the designs still as fresh as when they were conceived.

One day in September 1876, while driving through the Cotswolds, Morris was horrified to see how insensitive restorers were spoiling the magnificent medieval church at Burford. Determined to save what was left of Britain's architectural heritage, he founded the Society for



Morris's much-loved Oxfordshire house, Kelmscott Manor, in a woodcut which formed the frontispiece to his book, "News from Nowhere," published in 1892

the Protection of Ancient Buildings, which still flourishes. Forerunner of other amenity societies such as the Georgian Group and the National Trust, it helped to prevent the desecration of Westminster Abbey,



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Westminster Hall, the old school buildings at Eton, even the demolition and rebuilding of the west façade of St. Mark's, Venice.

"These old buildings do not belong to us only," Morris thundered. "They belong to our descendants. They are not in any sense our property to do as we like with them. We are only trustees for those that come after us."

The more he travelled, the more Morris longed for an England transformed again into a green and pleasant land. Aware of the urgent need to preserve the countryside, he rose in passionate defence of lovely areas like Epping Forest, threatened by indiscriminate tree-felling. He also campaigned against pollution, expressing the hope that one day, smoke pouring out of factory chimneys would be thought as much of a crime as highway robbery.

He was far ahead of his time, too, in realizing the soul-destroying effect of mechanical and repetitive labour, with no chance for a man to exercise God-given skills of hand and eye. Prophesying an age when a man might have to work as little as four hours a day, Morris wrote, "We should be masters of our machines and not their slaves, as we are now."

When he was 37, Morris fell in love with a gabled house—Kelmscott Manor, near the banks of the Upper Thames in Oxfordshire. In the summer of 1871, with Jane and their two daughters, he took a

tenancy of the house, sharing it with his friend Rossetti.

The tranquil garden at Kelmscott Manor inspired many of his lovely designs for wallpapers and fabrics: *Honeysuckle, Jasmine, Bird and Anemone*. One morning Morris heard his gardener angrily shooing away a thrush which had been raiding the strawberry nets. Morris pacified the man, insisting that no bird in the garden was ever to be molested. Later, he immortalized the incident in his chintz, *The Strawberry Thief*, which shows the bird with a berry-stalk in its beak.

A shadow had now fallen across Morris's married happiness, as a long-standing romantic attachment between Janey and Rossetti was gradually revealed. The emotional strain was too much for Janey, who became a semi-invalid. Rossetti expressed his love for the famous beauty by painting her over and over again, and pouring out his heart in passionate poems; Morris retreated in two long journeys to Iceland, writing regularly to Janey, for he was a devoted husband.

During middle life, Morris took up politics; and in 1884 helped found the Socialist League. He delivered hundreds of public lectures, travelling up and down the country speaking on windy street corners, debating with small groups of working men. His new allegiance lost him many friendships, overtaxed his health, cost him money

(he had to sell his personal library to raise funds for socialist propaganda) and also a Court appointment. Many Victorians admired the imagination and realism of his poetry, and on Tennyson's death in 1892, Morris was considered for the Poet Laureateship. But he made it known that his radical beliefs prevented him from accepting such an honour.

Morris and his fellow-socialists were castigated in the Press of his day; history, though, has taken a kinder view. Sir Arthur Bryant writes in *English Saga*: "In their dreams for the future, the early English Socialists sought nothing but a gentle Christian paradise after their own kindly, middle-class hearts."

When the Socialist League was taken over by anarchists, Morris withdrew from active politics. Since his youth he had written and illuminated some manuscripts which rank among the finest of all British decorated books. Now, at 56, he founded the Kelmscott Press. Determined that the productions of his press should be exquisite in all respects, he concerned himself with the minutest detail—printing, typography, even the pattern of the watermarks on the paper, and the exact chemistry of his very black ink. Today, these books are sought by collectors the world over, and sell for hundreds or even thousands of pounds.

A staunch admirer of Chaucer,

READER'S DIGEST

Morris laboured for his last five years on a Kelmscott edition of the poet's works. W. B. Yeats described the Kelmscott Chaucer as "the most beautiful book in the world." Morris just lived to see it completed—a copy, with its rich vine-bordered pages and leaf-entwined initial words, was put into his hands only three months before his death.

When Morris died on October 3, 1896, at the early age of 62, his doctor attributed his death to "simply being William Morris, and doing more work than most ten men."

Morris left behind him a world of beauty, from the grandeur of the decorations for the Tapestry Room in St. James's Palace to minuscule garlands of flowers stamped on the edge of book-bindings. Under his

dedicated example, craftsmanship—debased as a result of the Industrial Revolution—became once more an honourable way of life. Indeed, the modern teaching of handcrafts in British schools stems from Morris's restoring the dignity of such work; even the italic handwriting now learnt by thousands of British schoolchildren was inspired by his graceful experiments in calligraphy.

Today, thousands of Morris enthusiasts read his works in paperback, visit the William Morris Gallery devoted to his works in Walthamstow, and join William Morris societies in Britain and the USA. Generations to come will love and admire the achievements and ideals of the man who signed himself, "William Morris—designer."

Keep It Up

A TELEPHONE operator on duty on a long-distance switchboard put through a call to France. After letting the phone ring 40 times, the operator asked whether the call should be cancelled. "No, let it go on ringing," the caller said, "It's a very large castle."

—Paul Elliott

Read On

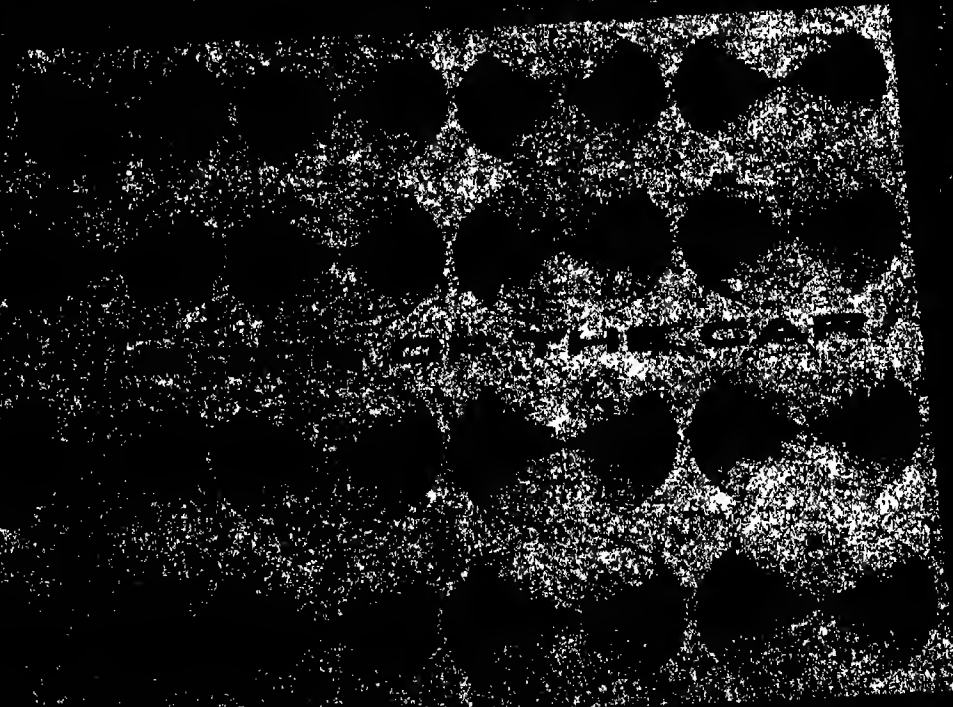
AMERICAN author Budd Schulberg wrote: "I am one of those tormented souls who live words as fishermen live fish, soccer players live goals and archaeologists live ruins. I will read philosophy, novels, newspapers, telephone books. And, in my deprivation, I write in order to have something to read."

—Sanctuary V

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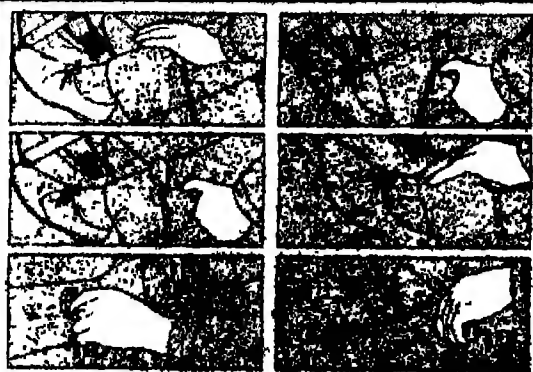
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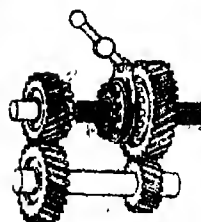
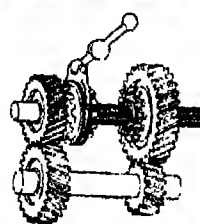
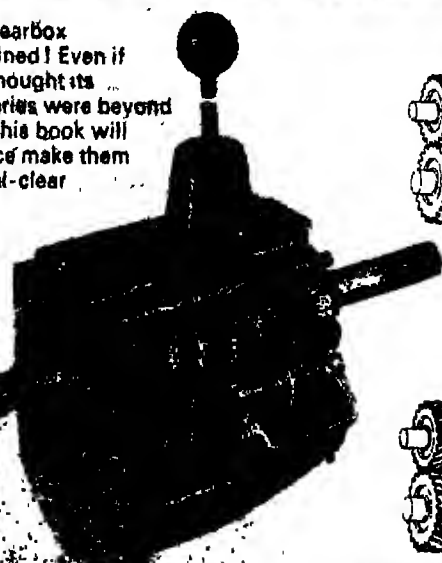
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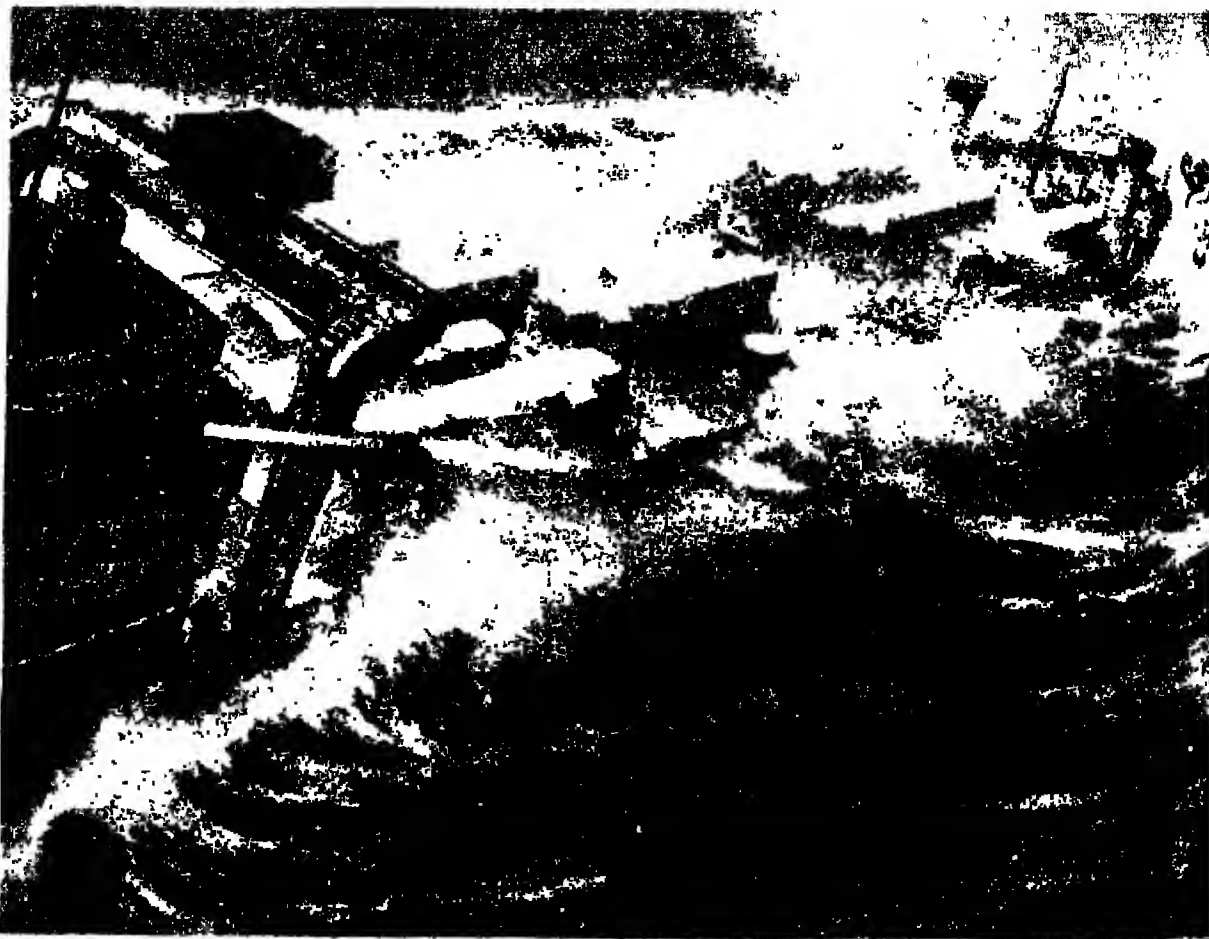
'Stand By to Abandon Ship!'

By HAROLD HORWOOD

Pounded by gales,
her cargo torn loose,
the freighter faced a
terrifying ordeal

GREEN-BLACK hills of water came sliding out of the northwest, capped with foam and spitting spray. They broke savagely against the side of the freighter *Rumba* as she laboured through snowsqualls 240 nautical miles southeast of Newfoundland.

"Seas running six to nine metres, winds gusting to 60 knots," Captain Elias Vaagnes noted in his log on December 14, 1972. Gales like this are common off the coast of Canada in winter. Neither the captain nor his 17 crew members were worried. Their 3,089-ton Norwegian freighter, carrying 16 diesel locomotives from Toronto to Yugoslavia, was



riding normally. Eight of the 115-ton engines were stored in the holds below. The other eight, bogies removed, were chained to the deck; their bogies were lashed in the ends of the holds.

Just after midnight, trouble struck without warning. A wave, higher than the others, caught the ship as she was rolling to starboard and heeled her down at a steeper angle. From somewhere under Captain Vaagnes' feet came a prolonged rumble—like thunder, he thought.

The captain knew at once that some of the cargo must have come loose, and he sent all available hands below. There they found two

locomotive bogies careering back and forth across the No. 2 hold. Dodging for their lives, the men tried time after time to lasso the crashing machinery. After what seemed like hours, they succeeded and lashed the heavy bogies back into place with steel cables.

Rumba continued on her way. But by afternoon the seas had become steeper. Waves hit the ship like the blows of a pile-driver. Once more *Rumba* was picked up by a freak wave, and heeled far down to starboard. She trembled violently, and the thunder of the shifting cargo was broken by even more ominous staccato crashing noises.

Rushing below, the men saw an appalling sight. The bogies had torn loose in the No. 2 hold, breaking the chains that had secured the locomotives. Now the locomotives themselves lurched from side to side with sickening force, threatening to tear through the sides and send the ship plummeting to the bottom. There was no way to secure them.

Captain Vaagnes ordered all hands to emergency stations and sent out a mayday call. Almost immediately the distress signal was picked up by ships and marine stations and was relayed to the Rescue Co-Ordination Centres at Halifax and New York. Halifax dispatched a four-engined Argus aircraft from the Canadian Forces Base on Prince Edward Island, 600 miles to the west, to provide on-the-scene communication. Rescue Squadron 413



at the base went into action. Weather conditions ruled out the use of helicopters, so a four-engined Buffalo turbo-prop aircraft, rugged and stormworthy, took off at 6.56 p.m. to join the Argus, which had left two hours earlier.

Although these two couldn't pick up the *Rumba* crew, they could drop life-saving equipment and provide illumination if the crew had to abandon ship. Reaching the scene two and a half hours later, the Buffalo crew confirmed that snow and high winds made a helicopter rescue impossible.

But other help was on the way. An 800-ton supply boat, *Smit-Lloyd 103*, regularly employed to service and move oil-drilling equipment, had set out from Sedco I, an off-shore oil rig 40 miles from *Rumba*. The boat's captain, Tjerk Straatman, and its first officer, Tonnie Bakker, both 29-year-old Dutchmen, were familiar with the ocean but had no experience with deep-sea salvage. Bucking mountainous seas, the boat reached *Rumba* at about 8 p.m.

In Deep Water. The freighter's ordeal was now at its worst. She shuddered continuously. The uproar below decks was like never-ending thunderclaps. "Stand by to abandon ship!" Vaagnes ordered.

No lifeboat could be launched in that storm without being instantly smashed. But *Rumba* had a six-man rubber raft, which the crew lowered and tied to the ship with lines. Six

men prepared to jump for the raft, in the hope that they could float it downwind to the *Smit-Lloyd*. The raft rose and fell in the steep surges, one moment level with the rail, then plunging into a trough six metres below. By good timing all six men landed safely in the raft.

Because there was danger of getting the lines caught in the rudder of the ship, the raft was unfastened and moved freely through the maelstrom of breaking waves towards *Smit-Lloyd*.

First Officer Bakker, directing the rescue from the boat's deck, ordered lines to be thrown out to the raft. Several missed, but some were caught, and eager hands aboard the boat began drawing the raft alongside. In the towering waves, the operation took an hour. By that time, the men in the raft were numb, and some had frostbite. Still, they were able to scramble up a rope ladder to the deck.

All but one, Jesus Diaz y Salas, a Spanish lad of 18 whose legs became entangled in a loose line. Suddenly he found himself hanging head-down in the icy Atlantic. Bakker, lightly built and agile as a cat, scrambled down the ladder and jumped on to the dancing raft. Flung about by the savage waves, Bakker reached Salas, cut him free and tied the unconscious young sailor to a rope to be hauled aboard *Smit-Lloyd*.

Watching from the *Rumba* deck, Captain Vaagnes decided that

the raft was more dangerous than his stricken ship, now listing heavily, her decks swept regularly by breaking seas. He refused to allow any more men to attempt the crossing.

At 3.58 a.m., a rescue helicopter arrived from Sydney, Nova Scotia. The pilot, Major Dan Campbell, circled and surveyed the rolling, plunging ship. He could see no way to rescue the crew at night. "We'll be back at daylight," he radioed, then headed for the deck of the oil-rig, Sedco I. There he took on fuel and told his five-man crew to get some sleep.

On *Smit-Lloyd 103*, meanwhile, Captain Straatman moved to get a towline on board *Rumba*. Risking a collision, he manoeuvred to within 22 metres of the freighter. Three powered lines (fired by explosives) were shot, without success; *Rumba's* crew was unable to secure them.

Tonnie Bakker, thawed out and in dry clothes, was now back on deck. "I'll take the dinghy across," he volunteered. With a life-jacket on and a line round his waist, Bakker shoved off. Waves tossed the little boat like a cork. Although his dinghy was unsinkable, it could easily capsize and one of those curving wave crests could kill him.

Cautiously he let the dinghy drift downwind towards the great curve of *Rumba's* side. Between the thunderous assaults of the sea on the ship, he reached and caught a rope ladder. Deck hands hurried to help

him aboard. Straatman fired his last powered line—right on to *Rumba's* deck. Bakker fetched the line. The freighter and *Smit-Lloyd* were connected.

It was now 5.30 a.m., December 15. *Rumba* was under tow. But the nearest port, St. John's, Newfoundland, was more than 300 miles away. The chances of her reaching it were slim.

Air Rescue. Returning at dawn, the helicopter crew decided to lift off all 13 men on board, including Bakker, although in the gale there was risk of killing the men or wrecking the helicopter against the ship's superstructure. Campbell jockeyed into position over the deck. He had to fly three ways at once—sideways to match the slow, forward motion of the ship, swaying forwards and backwards to match the roll, up and down to match the pitch—all the while compensating for a 65 to 80 km/h wind drift. Corporal Leo Whynott, in charge of the hoist, relayed instructions: "Down a little . . . a bit to the left . . . steady now . . . steady . . ." Using a rescue winch, Campbell and crew began hoisting men from the deck of *Rumba*. At last, with all 13 survivors safely aboard, Campbell flew off to St. John's.

With First Officer Bakker among those on their way to St. John's, Captain Straatman was the only navigating officer left on board with the abandoned *Rumba* in tow. He would have to remain on the bridge

READER'S DIGEST

for the entire 300-mile trip. He had passed one night without sleep. Now he faced at least two more.

Slowly, the pair moved northwards and ran into the teeth of a gale even wilder than before. Snow lashed the decks, the wind gusted to 130 km/h as *Smit-Lloyd* butted steadily through the storm and darkness. Straatman manoeuvred continuously to keep the cable correctly stretched, even though *Rumba* was now totally invisible, half a mile away. If he allowed the cable to go slack, it might touch the bottom of the sea and get stuck. If he went too

fast, the cable would snap tight, probably part, or tear out a section of the freighter's deck.

By mid-morning, the weather had cleared enough to reveal that *Rumba* was still afloat. But three of the locomotives on her deck had vanished into the ocean.

Finally, at midday on December 17, the sturdy boat made her way into the port of St. John's, *Rumba* still in tow. Hundreds of Newfoundlanders, used to battling the sea, lined the harbour hills to cheer her as she came in. A classic rescue had been completed.

A Child Shall Lead Them

WHEN he was on a visit to London with his parents and brother, 13-year-old David Pattillo went to Westminster Abbey. In the Abbey there is a notice, posted on a box, stating that a million people visit the ancient citadel of worship every year and a contribution of ten pence (about Rs. 1.90) is needed from each visitor to keep it in good repair.

David became worried when he noticed that of the tour party of 30 only his father put anything in the box — 50 pence. On the way back to the bus David borrowed £ 2.50 from his father and ran back to drop it in the box so that all on the tour would be represented.

On the last night the tour director asked the travellers what had meant most to them on the trip and what had been most disappointing. With all the earnestness of a 13-year-old, David told of his concern about Westminster Abbey. Some members remembered guiltily that they had paid £ 20 a head to attend a nightclub but had not given ten pence to one of the world's most historic shrines.

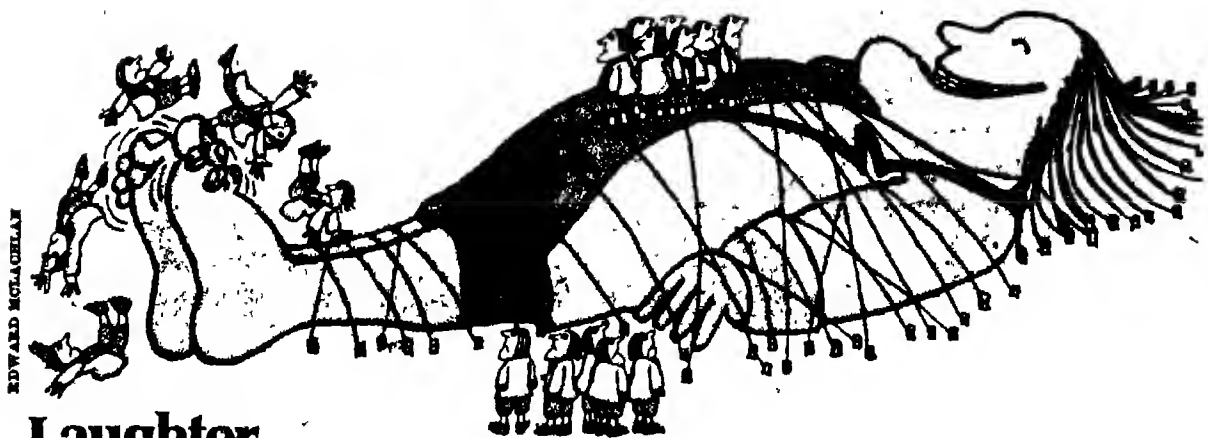
During the night a dozen envelopes were slipped under David's door. The next morning he and his father rushed to the Abbey, where an official opened the envelopes and found they contained more than £ 40.

—Hugh Park in *Atlanta Journal*

Idle Vice

OVERHEARD at a coffee morning: "My son's taken up meditation. At least it's better than sitting doing nothing."

—*Evening News*, London



Laughter, the Best Medicine

THE story is told of a man who heeded his doctor's advice to run 15 kilometres a day to improve his love life. After two weeks he phoned the doctor to say he'd been following instructions. "Has it helped you?" asked the doctor.

"I don't know," replied the runner. "I'm 210 kilometres from home."

—Earl Wilson

MY HUSBAND was building shelves in our bedroom and, intending to continue his work the next day, left some tools, including a hammer, screwdriver and chisel, on my dressing table.

The following morning, while I was sitting there combing my hair, my teenage daughter walked in. "Hi, Mum," she said, taking a look at the dressing table. "Fixing your face?"

—Virginia Conroy

AN IRISH beggar was sitting on the pavement expounding most eloquently. A well-dressed couple walked by. "May that blessin' of the Lord which brings love and joy and prosperity and all manner of happiness follow you for all the days of your lives,"

said the beggar. The couple walked on without a pause, and the beggar yelled after them, "An' never overtake you!"

—Dan Carlsinsky in *Modern Maturity*

IN HER newspaper feature, American columnist Erma Bombeck replied as follows to an invitation:

"Yesterday, I received your colourful brochure and special invitation to be a guest at your nudist camp. I hope you will understand when I tell you that I must decline, as I don't have anything not to wear." —P H S.

BOB HOPE tells the golf story about the fellow who comes up to a lake hole and asks his caddie what he should use. Caddie says, "Six iron." Golfer says, "No, give me a seven—I can make it with a seven." The caddie says, "I bet you two dollars you can't make it with a seven." Another man in the foursome says, "I don't think you can make it with a seven either. I'll bet you a hundred dollars." Golfer says, "O.K., I'll cover that bet, too." A third player says, "Put me down for two hundred dollars." Golfer says, "O.K., you're on." Then the fourth player speaks up, "You can't

READER'S DIGEST

make it with a seven iron. I'll bet you two hundred dollars, too."

Now the golfer has 502 dollars staked on this one shot across the lake. He puts the ball down, takes a look at the lake, takes a practice swing, looks down again, looks at the caddie and says, "I'mmm. Maybe I should use an old ball."

— Funny Funny World

IMMEDIATELY after his daughter announced her engagement, the father questioned, "Has he got any money?"

"Oh, you men are all alike," the girl replied. "That's just what he asked about you."

— Orlando Sentinel

How about the psychiatrist who treated a patient for three years because the man claimed he was always on the outside looking in—and then discovered that the fellow was a window-cleaner.

— H. A.

ONE MOTHER discovered her three-year-old flouncing around the house, peering under cushions, turning pockets inside out, clearly looking for something which eluded her.

"What on earth are you doing?" asked Mother.

"Playing a game."

"What kind of game?"

"It's called, 'Where on earth did I put my car keys.'"

— David Wallace, quoted in Omaha World-Herald

WHEN we left on our honeymoon, my husband had a bad leg. It soon became so painful that he could not walk. Before returning home, I contacted a friend, and asked her to meet our plane.

At the airport she saw a porter with a wheelchair, and she asked him if it

was for someone on our plane. He said it was, and wondered if she knew what was wrong. "Yes," she replied. "My friend was on his honeymoon . . ." and the porter burst out laughing and said, "Say no more!"

— Mrs Richard Roach

PROGRESS isn't always for the best. Smoke signals never got a Red Indian out of bed at three a.m. to answer a wrong number.

— Mack McGinnis, quoted in Washington Post

A WOMAN wrote to an agony column to tell about eating a fresh peach. It had been sliced and served over ice-cream. She discovered a worm: "I was speaking to my hostess when I noticed it. I kept my wits about me, continued to talk and ate round the worm. If such a thing happens again should I tell the hostess?"

The columnist replied: "Anyone who can eat round a worm and carry on a conversation with her hostess at the same time doesn't need advice from me!"

— Publishers-Hall Syndicate

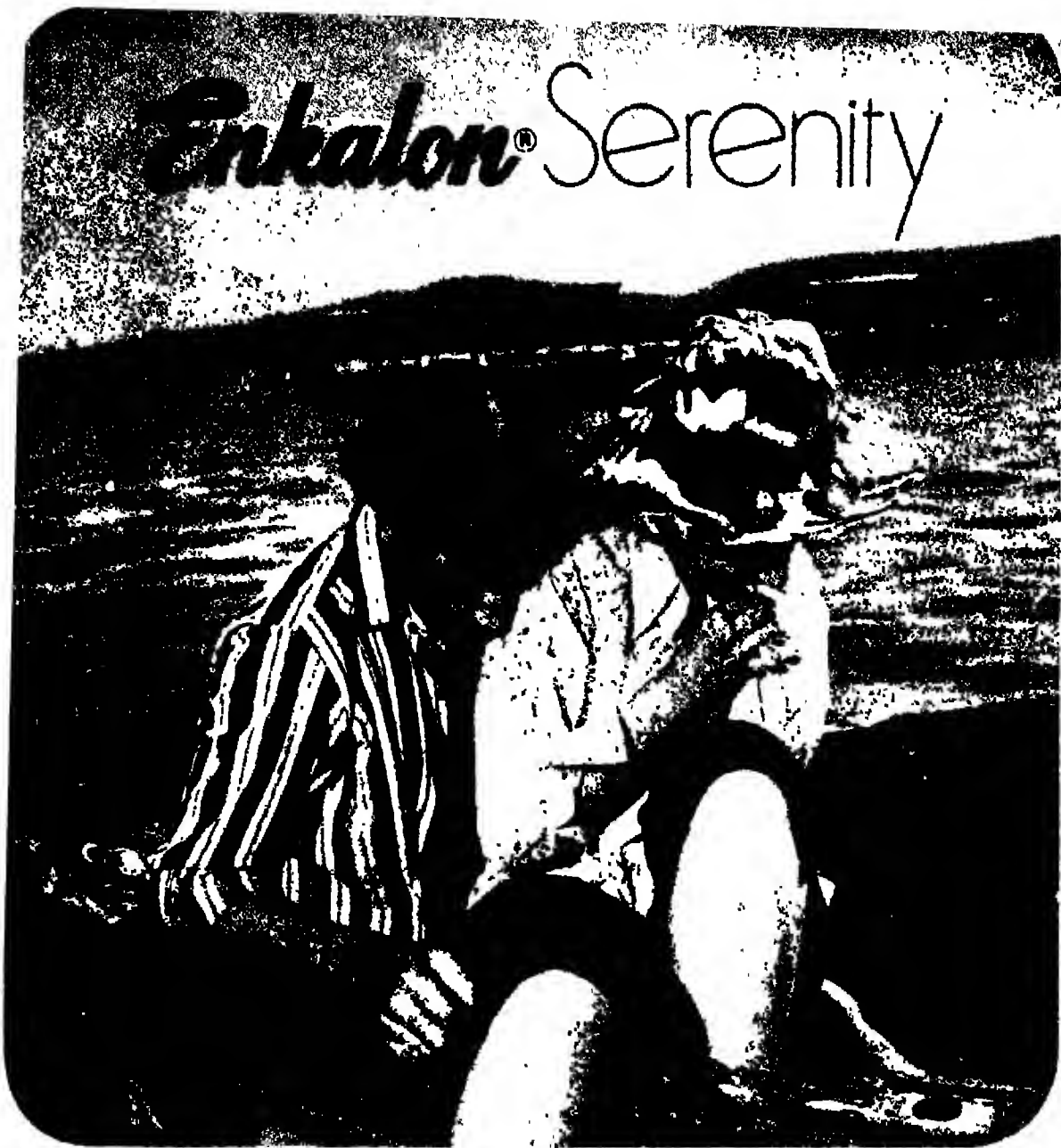
SCRAWLED on the wall of the ladies' room in a cafe is: "Please Wiggel Handel." Under which a music-lover has added: "If I do, will it wiggel Bach?"

— Herb Caen

LITTLE Miss Muffet sat on a tuffet eating her curds and whey. Along came a spider, who sat down beside her and said, "Curds have cholesterol, whey is fattening, and sitting on that tuffet will give you back trouble before you're 40."

— Bob Monks

Have you a joke for "Laughter, the Best Medicine"? See page 65.



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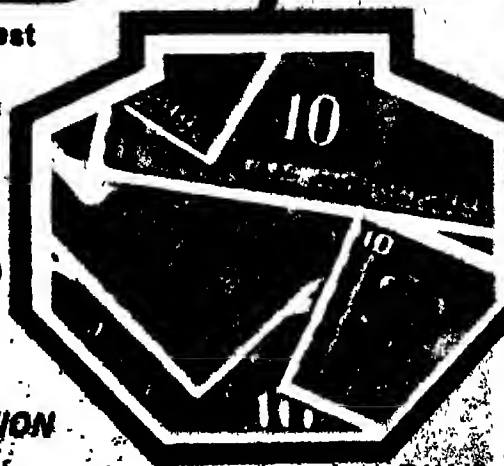
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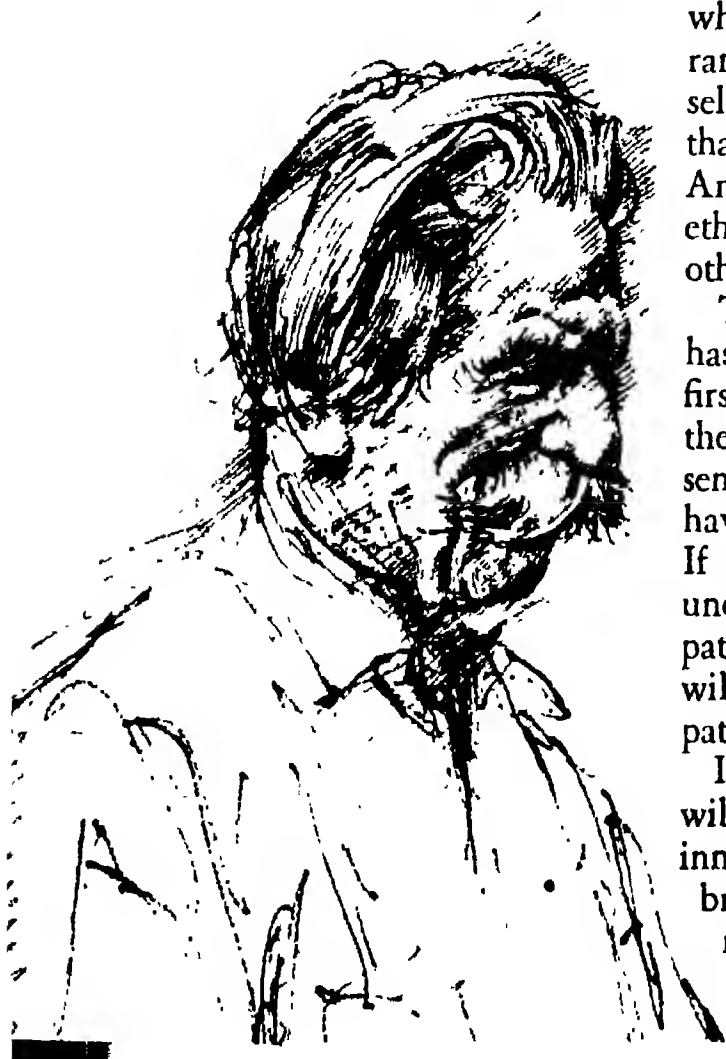
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Albert Schweitzer's Supreme Truth

Doctor, philosopher, musician, missionary, he won the plaudits and affections of all. We print here his own reflections on man's purpose on earth



THREE KINDS of progress are significant: progress in knowledge and technology, progress in the socialization of man, progress in spirituality. The last is the most important.

As soon as man does not take his existence for granted, but beholds it as something unfathomably mysterious, thought begins. Ethical affirmation of life is the intellectual act by which man ceases simply to live at random and begins to concern himself reverently with his own life, so that he may realize its true value. And the first step in the evolution of ethics is a sense of solidarity with other human beings.

To the primitive, this solidarity has narrow limits. It is confined, first to his blood relations, then to the members of his tribe, who represent to him the family enlarged. I have such primitives in my hospital. If I ask an ambulatory patient to undertake some small service for a patient who must stay in bed, he will do it only if the bedridden patient belongs to his tribe.

If that is not the case, he will answer me with wide-eyed innocence: "This man is not brother of me." Neither rewards nor threats will induce him

to perform a service for such a stranger.

But as soon as man begins to reflect upon himself and his relationship to others, he becomes aware that men as such are his equals and his neighbours. Gradually he sees the circle of his responsibilities widening until it includes all human beings with whom he has dealings.

In the preaching of Jesus, as in that of Paul the Apostle, it is a fundamental tenet that man has a duty towards every other human being. The idea of the brotherhood of all human beings is inherent in the metaphysics of most of the great religious systems. Moreover, since antiquity, philosophy has presented the case for humanitarianism as a concept recommended by reason.

Throughout history, however, the insight that we have a wider duty towards human beings has never attained the dominance to which it is entitled. Down to our own times it has been undermined by differences of race, religion and nationality.

Man belongs to man. Man is entitled to man. There is much coldness among us because we obey a law of proper reserve and do not dare to be as cordial as we really are. The ethics of reverence for life require that all of us somehow and in something shall act as men

towards other men. Those who in their occupations have nothing so to give, and who possess nothing else they can give away, must sacrifice some of their leisure, no matter how sparse it may be.

Fortunate are those who find some good cause in which they can act as a man for other men. Their own humanity will be enriched.

Open your eyes and seek another human being in need of a little time, a little friendliness, a little company, a little work. It may be a lonely, an embittered, a sick or an awkward person for whom you can do something, to whom you can mean something. Perhaps it will be an old person or a child. Or else a good cause that needs voluntary workers. Do not lose heart, even if you must wait a bit before finding the right thing, or make several attempts.

None of us knows what he accomplishes and what he gives to humanity. That is hidden from us, and should remain so, though sometimes we are allowed to see just a little of it, so we will not be discouraged.

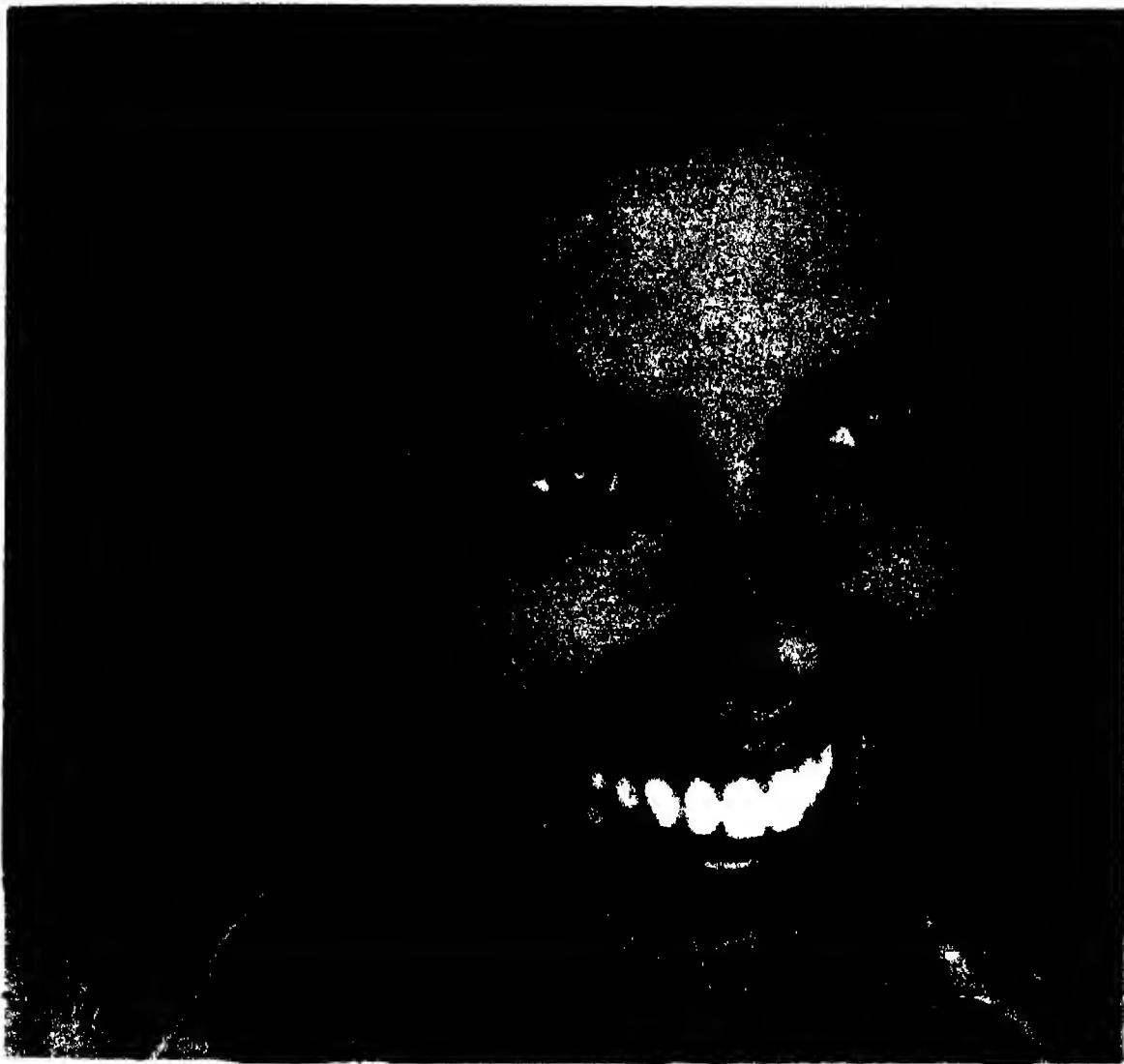
Our age must achieve spiritual renewal. A new renaissance must come: the renaissance in which mankind discovers that ethical action is the supreme truth and the supreme utilitarianism. By it mankind will be liberated.

CONDENSED FROM "THE TEACHING OF REVERENCE FOR LIFE," © 1966 AND PUBLISHED BY PETER OWEN, LONDON.
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Grass Roots

WHILE we're looking into the causes of prejudice, let's find out what bulldozers have against trees.

—L. O.



“A smile is a most important thing...”

“I really enjoy talking with them. Even when you have finished your routine work, you still go to your passengers and have a little talk with them, and they will be very pleased.”

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Cathay Pacific Hostess Miss Ok Cha Soh from Korea, interviewed in Hong Kong Oct. 3, 1974.

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Armchair Travelogue

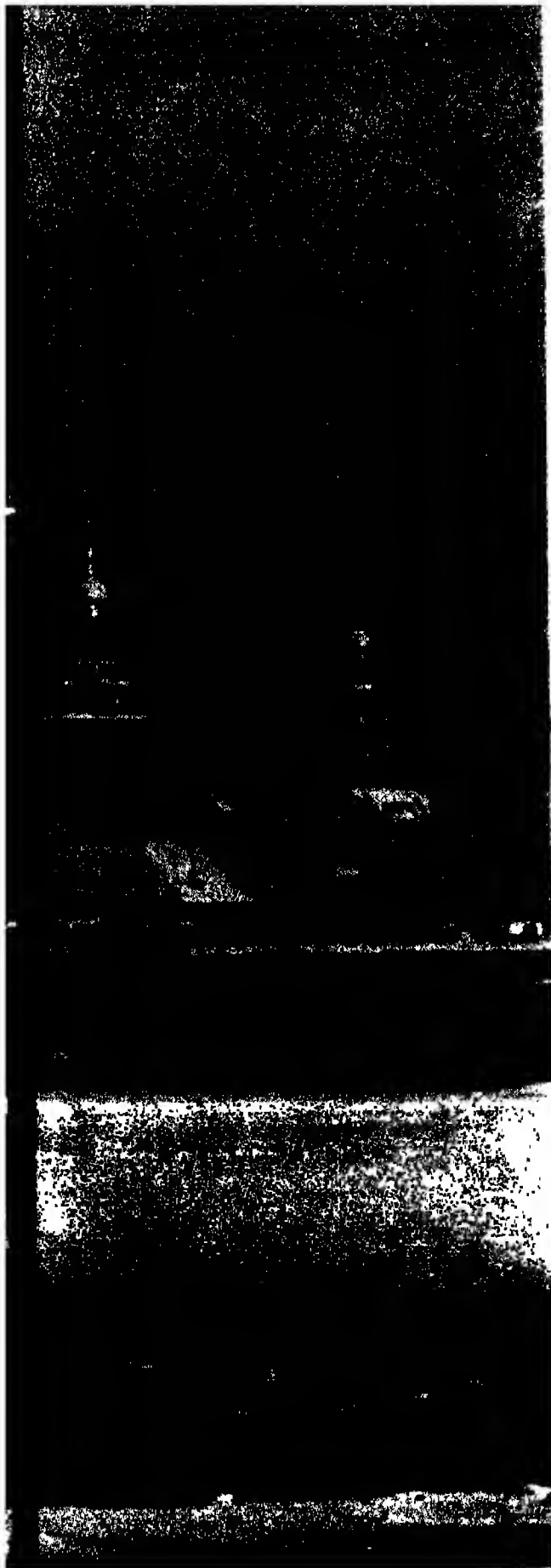
My Leningrad Love Story

BY CHRISTOPHER LUCAS

Here is the heartland
of Mother Russia,
ancient St. Petersburg,
jewel among cities

PETER the Great's "Window on the West" is the most exciting, extraordinary, entrancing city I've ever experienced. Exiled to arctic latitudes, Leningrad huddles in the innermost womb of the Baltic Sea, perching exactly on the sixtieth parallel, which also touches Greenland and Alaska. Scattered across more than 100 islands, resting on millions of stout oak piles, it is one of the world's few wholly planned cities, created by Peter the Great in one of the most dramatic, impulsive acts in history; and its imperial proportions reflect the extent and genius of his ambitions. Conceived by the greatest





The "Bronze Horseman": Peter the Great

eighteenth century architects—Italian, French and Russian—patrician St. Petersburg's glorious 570 square kms. have ironically become, in Leningrad, the crown jewels of proletarian Soviet tourism.

With its grandiose avenues, luxuriant parks and monumental squares, it is a city of high skies and vistas that sweep to the horizon, a city whose 621 bridges vault airily across the estuary of the pearly River Neva, across an infinite patchwork of iridescent canals and backwaters. It is a northern city; yet bright, not grey. Its palaces are dazzling

On the banks of the Neva the cathedral spire soars above Peter and Paul Fortress

BOVOTO: GASCONE/R. HARDING ASSOCIATES

turquoise and cream, its cupolas and steeples glisten with real, 18-carat gold, its gardens shimmer: vast areas of tulips, cascades of lilac, and the whisper of silver birches. In summer, under cloudless, deep blue skies, Leningrad

poet Pushkin dwelt; here that Tolstoy, Turgenev and Dostoevsky wrote their novels. And in St. Petersburg's Mariinsky Theatre, now known as the Kirov, the divine Pavlova and the immortal Nijinsky danced, and the renowned bass Chaliapin sang.

Both younger and smaller than Moscow, Leningrad is today Russia's Second City. Moscow's Kremlin was founded in 1156; St. Petersburg 547 years later. Moscow boasts 7 million people; Leningrad has only 4.1 million. Yet to compare Moscow with Leningrad is like pairing off a mud-splattered peasant with an empress. Moscow is a dusty, brutal city, deep in the steppes; its people are dour, dowdy, humourless. By contrast, Leningrad is breezy, elegant, cultivated; its people are friendly, gregarious and inordinately generous. "We may be second biggest," one Leningrad citizen said proudly, "but we're certainly not second best!"

In its brief 271-year history, Leningrad has lived more intensely, more passionately, than any other city on earth. Its stones have silently witnessed every form of outrage and excess, from the most barbarous cruelties to the wildest extravagances ever seen. Under the Romanov tsars, St. Petersburg was for 206 years the brilliant capital of one of the world's greatest empires, a despotic realm that held sway over 130 million subjects and one-sixth of the world. During these imperial



The Winter Palace and the Column of Tsar Alexander I framed by the Triumphal Arch

seems like a Mediterranean city that has lost its way.

This scintillating metropolis inspired the most awesome cultural flowering in Russia's history. It is here the legendary Tchaikovsky, Rimsky-Korsakov and Mussorgsky composed and performed their wondrous music. It is here the

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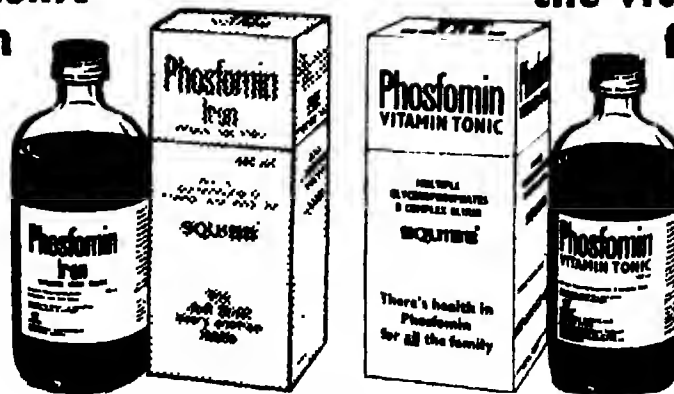
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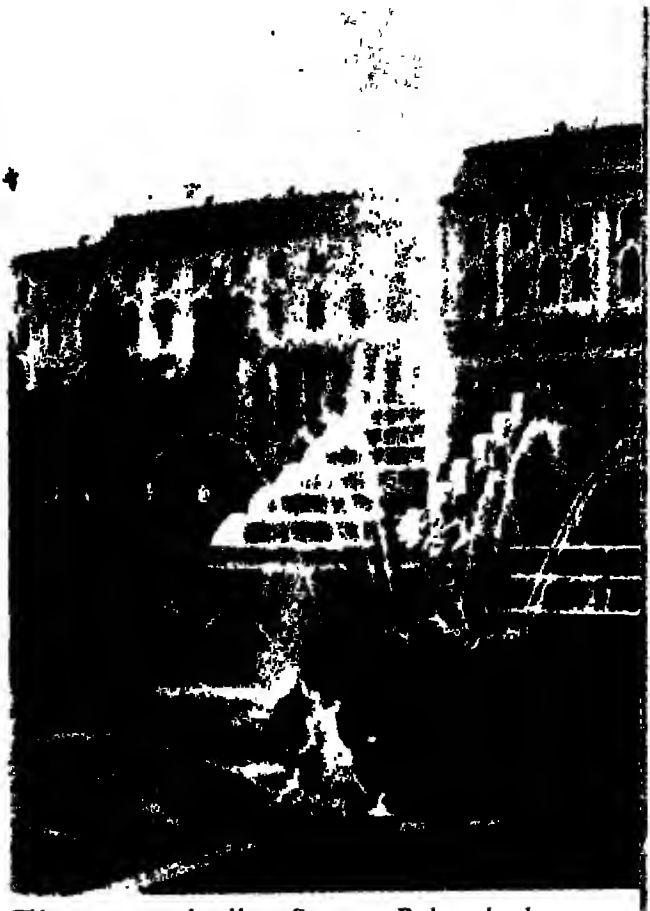
MY LENINGRAD LOVE STORY

years, the city celebrated victories over Europe's most powerful dynasties, including the defeat of Napoleon Bonaparte. While the serfs starved or froze to death, the tsarist courts staged the most profligate and wasteful banquets since the days of Nero.

Explosive Leningrad has been the cradle of no fewer than four revolutions, including the cataclysmic October Revolution of 1917, when ragged Bolshevik forces stormed the Winter Palace, and Lenin founded the world's first Marxist state. This revolutionary zeal in no way spared Leningrad's citizens during the purges of the 1930s, when Stalin liquidated them by the thousand. And worse was to come. During the Second World War, Leningrad was the heroic victim of one of the most horrible chapters in world history, a 900-day siege by the Nazis during which 1.5 million people perished. [See "The Siege of Leningrad," RD, December, 1970.]

Yet postwar Leningrad is a phoenix risen from its own ashes. Despite Rs. 26,000 crores' damage, the holocaust's ravages were effaced. Stone by stone, the entire city has been rebuilt and most lovingly restored. Whole squares have been repaved with the same cobblestones; the same statues embellish the same gushing fountains. A few intentional scars survive, yet Leningrad now stands as a phenomenal feat of restoration. And, thankfully, it remains a city the way cities used

to be; it retains a gentle touch. There is no frantic rushing, and traffic jams are non-existent. People still stroll easily past the shop windows on Nevsky Prospekt, pause to buy three irises, or a rose, before catching the underground



The cream and yellow Summer Palace basks in luxury above its spuming fountains

home. There are no street muggings, and few signs of urban turmoil. And on summer Sundays, in the squares, old ladies sit knitting; Red Fleet sailors walk arm-in-arm with their girls; children play on swings and roundabouts.

And yet, it must be said, despite the city's magnificent backcloth

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MY LENINGRAD LOVE STORY

and its citizens' often jaunty behaviour, there's an air of almost painful boredom. Daily life in Leningrad is interminably regimented. And while affluence may not be an end in itself, the people of a world superpower would seem entitled to more than they get. Consider this:

An average Leningrad salary is about Rs. 1,520 a month. Shopping around, I found that a shoddy plastic handbag costs Rs. 133, a tinny clock Rs. 380, a nylon blanket Rs. 437, a colour television Rs. 5776 and a tiny Fiat car Rs. 76,000. I couldn't find chicken anywhere, and steak is a pipe dream. And in all Leningrad there were only two kinds of bread—one was grey, one was pitch-black, both were usually stale.

By any yardstick, it's a tough system to survive, but the city's fiery, resilient people manage now, as in the past. And what a past it was: every back alley has a story, every mansion a drama, and a leisurely sightseeing exploration through this "Venice of the North" can take weeks, even months. Yet I have my favourite corners, and I would like to share them.

One sunny afternoon, my Intourist guide, Natasha, and I crossed the bridge to Zayachy Island, through the Triumphal Arch of St. Peter, and into a cheerful vista of cobbled squares, rustling plane trees, and the looming, 12-metre-high bastions of the Fortress of Peter and Paul, the city's first major building.

Conceived by Peter the Great, designed by the Italian architect Domenico Trezzini, it's both beautiful and tragic, heroic and melancholy.

Under the tsar's whip, a force of more than 20,000 soldiers and conscripted serfs raised its 20-metre-thick battlements in just six months. Yet the 200 fine bronze cannon, forged on the spot, never fired a shot in anger. At completion, the mighty island-fortress was already obsolete, superseded by Kronstadt, 27 kms. off the Neva's delta. So, with barbaric *élan*, Tsar Peter turned his saintly stronghold into a Russian bastille. And as an odd epilogue, he placed a resplendent cathedral within the prison walls.

Amid so much grandeur, modesty is a rare quality, but I finally found it: Domik Petra I, the "Little House of Peter the Great." The city's oldest dwelling, this log cabin was the home of Peter the Great during the early years. There are two rooms: in one, Peter worked and entertained his friends, in the other, he ate and slept.

You can't help admiring this extraordinarily autocratic but immensely human man. Even when splendid palaces were ready, Peter the Great still returned to his homely log cabin. From his front door, he loved to watch the big sailing ships tacking up the Neva, to check the ever-changing skyline of his new capital. Even today, the cabin's roof shelters a skiff that the tsar hewed with his own hands, and a sturdy

READER'S DIGEST

iron stewpot he forged himself.

All Peter's heirs dutifully added their personal touches to the fabulous capital, yet nobody more extravagantly and with greater panache than Catherine II, during whose reign the city reached its luxurious zenith. It was she who endowed St. Petersburg with its most famous and beautiful monument, the ten-metre-high "Bronze Horseman," immortalized by Pushkin. This gigantic statue shows Peter mounted on a nobly prancing steed, poised on the edge of a veritable cliff of granite. Its laconic inscription is a classic of imperious brevity: "To Peter I, Catherine II."

Not far from the "Bronze Horseman" is the marvel Russians call Dvortsevaya — "Palace Square" — for two centuries the centre of all Russia. Sweeping across eight hecets. in a gigantic half-moon, it is so immense that mortals look like midgets and buses like matchboxes.

At Peter's death, Dvortsevaya was just a hayfield. Then, three decades later, the Tsarina Elizabeth, his daughter, began the legendary phantasmagoric Winter Palace.

Choosing the pasture's north side, facing the Neva, architect Bartolomeo Rastrelli conceived an oblong quadrilateral of palaces with four wholly different and contrasting façades. His original plans called for 1,050 rooms, but this "too-modest" blueprint was eventually extended to more than 2,500 rooms.

This baroque fantasy, crammed

with gold and every conceivable luxury, served as the tsars' Buckingham Palace until the Revolution struck. As in imperial days, the lime-green palaces still shelter the incomparable Hermitage art collection, with its 25 Rembrandts and its Leonardos, Raphaels and Michelangelos, with its roomfuls of Renoir, Cézanne and Van Gogh. The collection is so big that anyone investing only 30 seconds on each *objet d'art* would spend nine years here.

To the south, the exotic Winter Palace is offset by the chrome-yellow façade of the former headquarters of the chiefs-of-staff and the foreign-affairs ministry. This monumental group is brilliantly pierced right through the middle by a soaring Triumphal Arch. Almost as tall as the Arc de Triomphe, the 28-metre vault is boldly crowned with 16 tons of iron statuary: a Winged Glory and his Chariot of Victory, drawn by six horses.

In Dvortsevaya's epicentre stands the Column of Tsar Alexander I, glorifying his defeat of Napoleon. Carved out of a single rock face, this obelisk of rose granite looms 47 metres high, and was, ironically enough, designed by a Frenchman, Montferrand. The 600-ton column is so heavy that it took some 400 serfs and 1,400 soldiers to roll the granite into place. And it was so cold when they built the pedestal that Montferrand reportedly ordered his cement to be mixed with



☒=PQR

READER'S DIGEST

vodka to prevent its freezing.

No place in all Russia is grander and more gloriously ostentatious than Petrodvorets, the Romanovs' first and premier Summer Palace. A soaring, baroque rhapsody of castles, cascades and silvan parks, the estate sprawls across a phenomenal 988 hecets., facing the Gulf of Finland 29 kms. outside Leningrad. Against deep blue summer skies, an exquisite, sweeping façade—almost 270 symmetrical metres of glass panes, cream and canary-yellow stucco—shimmers under a slanting roof of silvery pewter. This stupendous creation luxuriates high on a hilltop, above a watery explosion of spouting fountains, tumbling cascades and spray-splashed statuary, including the glamorous Grand Cascade, with its 37 gilded giants, 150 naiads and sea monsters, 29 bas-reliefs, scores of fountains, marble basins and cavernous grottoes.

Then there are the *shutiki*, or "joke fountains." Designed for blasé courtiers, these elegant practical jokes improvise impromptu showers if you step on a wrong pebble or sit on a wrong bench. Prettiest of all is a discreetly hidden oak tree, made of metal, that sprouts (and spouts) from a bed of iron tulips. Comrades and children love it, as they do Petrodvorets itself. The place is a genuine playground,

an imperial garden that has matured into a public park.

For modern Leningrad is a great city, a moving city, live, vital, historic. It is a city without starvation or serfdom. It is clean and efficient. It has no unemployment. Yet it can also be a depressing city. For its people must suffer the inequities and ineffectiveness of an obsolete system that offers indoctrination, censorship—and no escape.

Perhaps the most amazing thing about Leningrad is the fact that these people, these splendid mercurial Slavs, have been able to survive despite the system—perhaps not with gladness in their souls, but to survive none the less. How can I forget them? How can I forget the strangers who invited me to dinner, so humorous, gentle and solicitous? Or my guide Natasha, sweet, fascinated, always tripping over her Intourist training? How can I forget the gruff, yet jolly, taxi drivers, the kindly old couple in the park, quietly working on a crossword? They were all real people, full of dignity and pride and endearing charm.

I cannot feel sorry for such people. It would be an insult. Perhaps a better word is compassion. And admiration. And envy—for system or not, they are exhilarated every day of their lives by the eternal glories of their eternally glorious city.

SURGEON to patient: "You had better prepare yourself for a shock. We've come to the conclusion that we have to remove the whole of your wallet."

—Observer in *The Financial Times*, London



Personal Glimpses

WELTHY Honsinger Fisher, 95, was a mere 68 years old when she conferred with Mohandas Gandhi and he told her that she ought to teach adult Indian villagers to read and write. Her initial reaction was that she could not insult proud people with the Indian equivalent of the US basic reading book's "Sally sees Spot."

Gandhi set her straight, Mrs. Fisher reports. He said, "If it's a cotton-growing village, first teach them to write the word 'cotton', and then, 'This is good cotton,' and after that, 'Good land makes good cotton, bad land makes bad cotton.'"

Mrs. Fisher's adult-literacy programme has been one of the most successful in India, and is now being used in 17 other countries as well.

—Laurie Johnston in the
New York Times

IN HIS younger days, French painter Maurice Utrillo drank heavily. Every time he went on a drinking spree, he got into a brawl and had to be carried off, kicking and punching, to jail. The police would release him after he sobered up, but in a week or two the scene

At _____ in the constabulary were another, but as the

years passed, their attitudes softened. Utrillo permitted himself to be led away without a struggle, and the police came to regard him as a guest rather than an inmate. They also kept a supply of paints and brushes at the jail so he could continue his work during his incarceration. Utrillo knew he had really won them over when they reserved for him a cell which let in the best light!

—E. E. E.

EDGAR TAFEL, an architect who was one of the first apprentices at Frank Lloyd Wright's Taliesin architectural school, recalls the time he moved a ditch from where Wright had planned it to go: "When he got back from Europe and saw what I had done," Tafel relates, "he was furious. I was so upset, I stepped back and fell into the ditch. I still remember him standing on the bank above me, waving his cane and shouting, 'If you'd put the ditch where I told you to, you wouldn't have fallen into it.'"

—S. B. C.

PIANIST Artur Rubinstein is fascinated by audience reactions. What he considers as perhaps his greatest success with the public took place on an occasion when an audience overflow was accommodated by chairs on the

READER'S DIGEST

platform. At the end of the programme, he gave several encores, retiring backstage after each.

"After the last one," he recalls. "I was passing through the crowd seated on the stage to take another bow, and there was an old lady in one of the aisle seats trying to get up and put on her coat. Well, I was born in Poland, you know, where one is very polite towards ladies. So I just stopped a moment and helped her on with her coat." He grinned, "And I had the greatest ovation of my life! Much more than for my playing."

—G. M. Loney in *The Saturday Evening Post*

LEONARD Woodcock, head of America's United Auto Workers, confessing an error during certain negotiations, declared: "I had forgotten some of my early organizing experience. And that is, when you indulge in inflammatory rhetoric, you delight the people who are with you in the first place; you offend the people who are against you; and you tend to alienate some of those in the middle whom you have to convince in order to win."

—William Serrin, *The Company and the Union*

RACHEL CARSON, author of *Silent Spring*, watched an autumn migration of monarch butterflies with a friend one day towards the end of her life. She was aware that she had cancer and would probably not revisit the spot. That evening she wrote:

"It occurred to me this afternoon, remembering, that it had been a happy spectacle, that we had felt no sadness when we spoke of the fact that there would be no return. And rightly—for when any living thing has come to the end of its cycle we accept that end

as natural. For the monarch butterfly, that cycle is measured in a known span of months. For ourselves, the measure is something else, the span of which we cannot know. But the thought is the same; when that intangible cycle has run its course, it is a natural and not unhappy thing that a life comes to its end."

—Paul Brooks in *House of Life: Rachel Carson at Work*

GEORGE BALANCHINE, veteran choreographer and director of the New York City Ballet, began his ballet training in Imperial Russia when he was nine years old. Asked how he creates his dances, he explained, "I do not create. God creates. I just arrange. The ballet steps are already there; it's just a question of co-ordinating them."

—Leonard Lyons

PRESIDENT of one American college is Gail Parker, an attractive brunette of 29, whose husband, Tom Parker, is the college's vice-president. Husband and wife teams are unusual in US college administrations, and a team with the wife in the No. 1 spot is, as far as can be determined, unique.

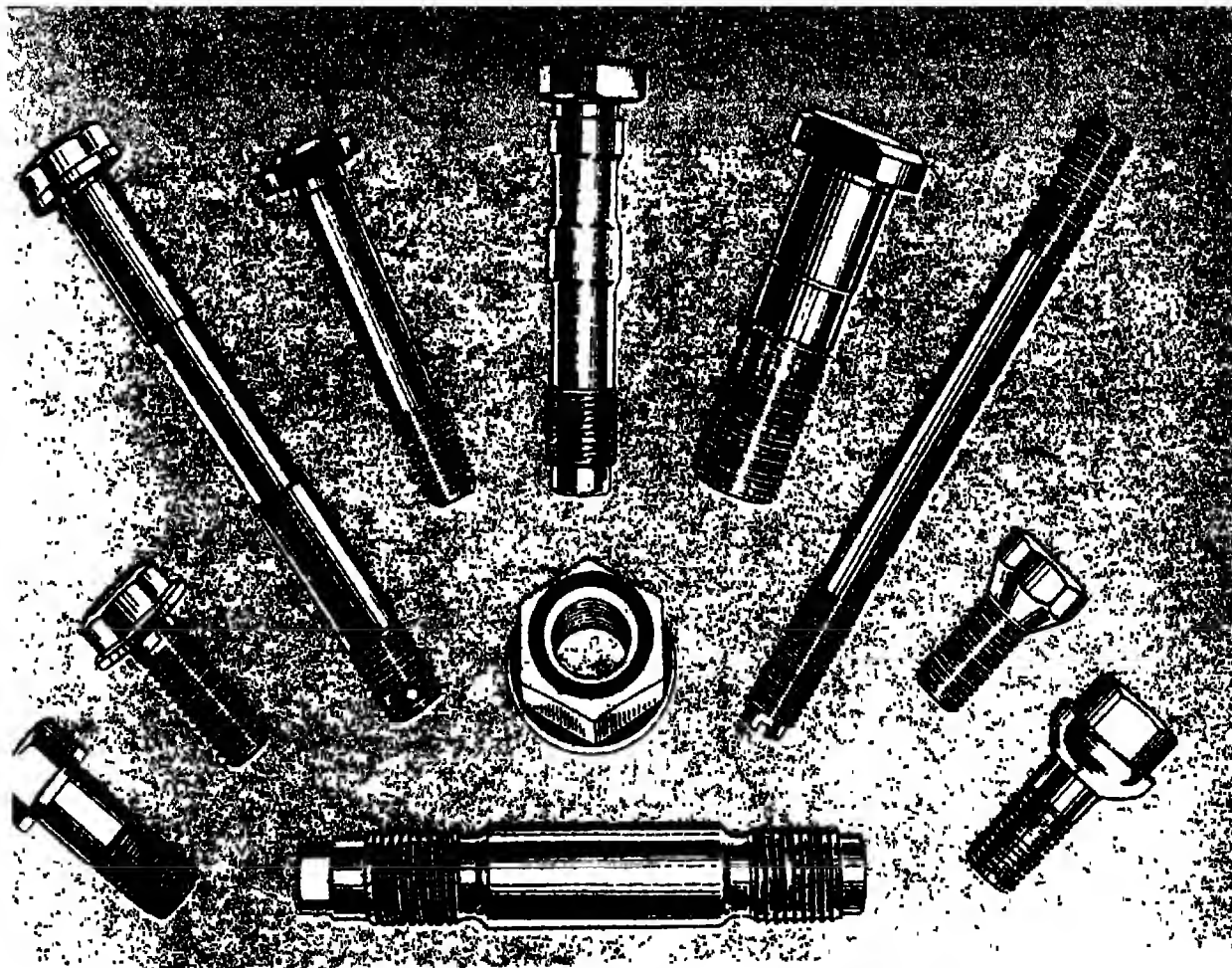
Does Tom resent being second? Gail doubts it, adding, "It isn't every one who gets to sleep with the president."

—Time

NOEL COWARD's producers were striving to find a suitable title for the first of the "Night of 100 Stars" charity shows. Someone suggested "Summer Stars," to which Coward replied "Some are not."

—The Wit of Noel Coward (Penguin, London)

"Have you a 'Personal Glimpse' anecdote? Please turn to page 65."



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Darkness at noon was facing young Gautam

By *Pranav Kumar*
and *Shruti Singh*

...

...

...

Indu X-Ray brought light into his life once again

Twenty-five year old Gautam Mathur was going blind. The doctors couldn't understand why—until they took an X-Ray. The clarity of the Indu X-Ray revealed a minute growth on the brain pressing the optic nerve and making him almost totally blind.

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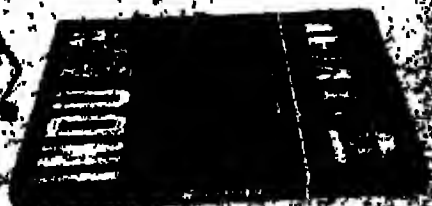
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On-the-job creativity can
turn almost any work
into an adventure—perhaps
even a new career

Your Ideas May Be Your Future

By WILLIAM ELLIS

SEVENTEEN-year-old Lynn works part-time as a typist. Recently, her office manager noticed that she was tucking a slip of green paper behind the sandwich of invoices that she rolled into her typewriter. The green slip had an odd-shaped window cut into it.

When Lynn had finished, the manager picked up the slip and found an addressed envelope behind it. She smiled. "Beautiful! You type addresses on the envelopes at the same time that you type invoices!"

A small thing, perhaps—but Lynn's on-the-job inventiveness speeded the entire office's typing practices—and earned her a rise.

Usually, we assume that creativity belongs to architects, artists, decorators and such. But often, while the creative types are painting the same bowl of fruit and designing the same glass-box buildings, a harassed sales manager somewhere is working out a new way to move a surplus stock of galvanized iron, or a tool-and-die maker is designing a power mechanism that will do three jobs simultaneously. On-the-job creativity is *everybody's* property, and hundreds of people have discovered that it can make almost any line of work into an adventure, a career.

One of these people is a mechanic for a large manufacturing company. He knew that the company was planning to purchase some expensive new machinery to speed manufacture of car engine bearings. Eating his lunch under a tree one

day, he suddenly envisaged a device which, installed on the company's present machines, would streamline the production just as effectively as the costly new equipment. He flattened his brown-paper lunch bag, drew a diagram of his idea, and dropped the bag into the company suggestion box. The device worked. And the company rewarded him with a substantial bonus.

The principal arena of creativity is the workaday world of people who are confronted with getting a job done. For instance, a city librarian had the responsibility of moving 60 tons of books to a new library building on the other side of the town. The library board had budgeted for the removal expenses; but the librarian preferred to save what money she could for more books. She persuaded the local newspaper to publish a story headlined: "Draw Out All Your Summer Reading Now. Return Books in September—to the New Library." Presto! The book-moving job was taken care of at a considerably reduced cost.

The existence of large company research and development laboratories often discourages an individual from developing his own on-the-job ideas. But big research and development departments have two major handicaps: they are usually involved in *big* problems; and they are not likely to have your knowledge of the problems—and the possibilities of your job. For

example, noticing how many calculators and adding machines that he sold were later stolen from offices, salesman Paul Sander devised a lock and cable attachment for lashing the machines to desks. Then he formed his own company to manufacture and sell the device.

On-the-job creativity is often merely a matter of imaginative combinations. A garage opposite a businessman's restaurant runs a perpetual tyre-selling contest among its employees. The fellow who usually wins goes over and inspects the tyres in the restaurant car park. When he finds worn tyres, he leaves a handwritten note under the windscreen wiper:

"I have a new tyre for your left front. If you're here tomorrow, leave your car across the street. I'll put the tyre on while you eat."

—Mike-from-across-the-street

Possibly the most important single element in bringing an idea into being is simply believing in it and hanging on to that belief. Matt Kiernan was an aggressive young salesman of business education courses. His golden idea came during his daily two-hour journey by rail to New York. He proposed to his employer that the company hire a railway carriage and present its courses to commuters.

Management couldn't see the idea "at that time." But every day that Matt watched people on the train sleeping, wasting precious hours, the idea gnawed at him. Finally, he

READER'S DIGEST

resigned his job, hired a railway carriage, built two classrooms in it, and formed a company called "Edu-tran." A local university supplied professors, books and the curriculum, as well as 55 commuting graduate students. Matt's programme has now expanded to two other railway companies in the eastern United States, and to 200 students.

Where do creative ideas come from? For an answer, observe yourself. Do you do your best thinking at your desk or when you're away from the job? Do your hunches come in a flurry for several days, then dry up for a month or so? You can study and take advantage of these patterns. Do your ideas jump out at you when you're driving? Pull out of the traffic to write them

down while the bloom is on them.

Ask other people about their creativity tricks and adopt any that suit you. A middle-management friend, for example, pretends that he's chairman of his company, and imagines what he would change first.

Many people abandon a good idea when they get stuck on a "missing link" that they can't resolve. Professionals in creative jobs encounter the same gaps, but they leave them blank while they work out the rest of the idea. Whatever the problem, a good idea should keep burning a hole in the pockets of your mind. Keep the idea simmering. Your subconscious mind will work on it while you're eating, sleeping, doing chores. Don't give up. Your hunches may be your future!

Queen's English

AN AQUARIUM shipment of tropical fish arrived from Hong Kong in a crate marked: "Delay or cold will die. To put in a fit place." The aquarium owner thought the sign was amusing enough to pin up in the shop. Then an Oriental customer walked in. "I'll bet that sign is from Hong Kong," he remarked.

"Why?" asked the aquarium owner.

"Ah, so," the man replied. "Those British write everything funny."

—Fred Wolfe, quoted in *Phoenix Arizona-Republic*.

Smellbound

I LIVE in a small agricultural town which has a tomato cannery. One day I was walking past the local school when steam started pouring out of the factory chimney several streets away, and within seconds the spicy aroma of cooking tomatoes filled the air. Stretched out on the grass were two teenage boys. One of them rolled over, inhaled deeply, then turned to his companion and said, "Do you realize that we live in such a small town that even the air pollution smells good?"

—A. H.

The Man Who Was Born Twice

BY MAURICE SHADBOLT

At 24 he was medically still a 'blue baby.' Today he is nearly 50—and living life to the brim

MODERN medicine has brought many back from the brink of the grave. As a result, we tend to take such triumphs for granted. How would it feel, though, virtually to be born at the age of 24 through medical ingenuity and given the colours of the world in sudden, dazzling measure? That, more or less, is what happened to Dennis McEldowney.

At the age of 24, Dennis had spent most of his life in bed, and really had no right to be alive at all. He was afflicted with a complex congenital heart condition known as Fallot's tetralogy, which once meant early death for most victims, the unfortunate "blue babies." The condition is primarily a narrowing of the pulmonary artery so that circulation of blood to the lungs is deficient, and the blood receives too little oxygen to fuel the muscles. The skin thus develops a distinctive blue colour.

But Dennis's symptoms were

awry; he was never noticeably blue, and his true condition was well disguised. In infancy, his doctors diagnosed a different heart defect and gave him a fair chance of survival until the age of eight.

At eight, however, he was still tenaciously walking his New Zealand world, if in rather an enfeebled fashion, and even plodding off to primary school. But soon, the world closed down on him, hour by hour, day by day, until he became entirely bed-ridden. Breathlessness made him immobile, and before long that immobility atrophied his muscles. Since there was nothing in his supposed heart condition to explain this, his doctor thought his behaviour neurotic. But that didn't help Dennis rise from his bed.

The world beyond his bedroom fast receded: his existence, from the age of 12 onwards, became confined by four walls, a ceiling and a floor.

There was a door, of course, through which people came and

went, and there was a window with a view of pastureland and hedges in the foreground, sometimes cows and farm-hands and the mountains of South Island in the distance, hazy with summer or white with winter. There were times when—despite people and books, newspapers and radio, and that pleasant pastoral view—Dennis had difficulty persuading himself that the rest of the world was not an elaborate hoax. All he was certain about was his bedroom, and what went on within.

That bedroom swallowed up what was left of childhood, then his adolescence, finally his young manhood. He read widely and intelligently, as long as he had the energy, but otherwise, the business of remaining alive—eating, eliminating, keeping himself clean—sapped his strength. As people in number slipped away from his life, he began to people his room in imagination, inventing an entire country, drawing maps of it, designing postage stamps, becoming any citizen who took his fancy.

More significantly, he began to act out a fantasy of playing publisher, producing a handwritten magazine which was duplicated and distributed to friends and relatives. Soon his articles and short stories found a place in journals of wider circulation, and he became a regular columnist for the New Zealand Presbyterian publication *Outlook*.

But after the age of 20, still in the care of his mother, his life grew

even more circumscribed. He wrote less, he read less. An hour listening to the radio could leave him exhausted and breathless. Yet even then, at his lowest ebb, he doubts whether he was really unhappy. "Continuous unhappiness," he now wryly recalls, "requires a strength of mind which I did not possess."

Not long before his twenty-fourth birthday, doctors took a second look at Dennis and identified him as a miraculously surviving blue baby. He was flown 960 kms. north from his native Christchurch to Auckland's Green Lane hospital, which was already beginning to develop its present worldwide reputation for advanced heart surgery. Then, on June 28, 1950, Dennis McEldowney became New Zealand's oldest-ever blue baby to be operated on.

For a time, as the young man slept under an anaesthetic, the operation seemed touch-and-go. In the end, though, it was a satisfying success. Encouraged, the Green Lane surgeons immediately treated a slight, fair-haired girl called Zoe Greenhough, older than Dennis, with a similar medical history. By the time Dennis had left the hospital to convalesce at home, Zoe and he were close friends.

When Dennis arrived in Christchurch, a three-year-old nephew stared at him for a long time, then finally announced, "Dennis woke up." He had indeed. Like a Rip Van Winkle, he had woken into the world in a way that was

dazzling—and often dismaying. There were, for example, the pleasures and mysteries of taking a bath—of manipulating two taps to get the water to the right temperature, then learning to relax comfortably in the soapy water. There were the appalling number of things to consider in making a cup of tea: water, kettle, tea, teapot, milk, sugar. One seemed to need genius to organize everything at once.

Still worse, there was the agonizing business of politely taking afternoon tea with other people—of trying to eat, drink and talk at the same time. How on earth was it to be managed, and how did other people arrange to be so elegantly confident about doing it?

One new burden was especially hard to manage. That was the sky. It was too big, bigger than he'd ever imagined. When he attempted to sit out in the garden, under the sky, he felt dizzy and faint, as if he were going to fall. He began to fear that he might have to spend the rest of his life under a ceiling. That is, if the ceiling wasn't too high. Once, in a front seat of a theatre, he looked up and was done for: he had to beat a fast retreat to the back stalls, under the shelter of a balcony.

Walking wasn't so bad—as long as he didn't cross any large open space. If he walked close to a fence or a hedge, there was something to which he might cling if the sky threatened. Walking in itself was a large enough problem, bringing



Dennis McEldowney

muscles back to life after years of disuse. But there was a mental problem too: just the *idea* of walking could set his heart pounding perilously before he even began, and he would return home breathless and exhausted after only 100 metres or so. It was three months before he could take a short walk for granted, and 18 months before he began to feel at peace with the huge truth of the sky. (It was years before he could really sit in comfort in a large open space, such as on a beach.)

Walking never ceased to be a revelation: leaves and grasses and flowers, plants of all kinds in vivid variety; birds, insects, dogs, cats, hedgehogs. And above all, people. They seemed part of natural history, too. And as incredibly various as anything else in nature: old, young, male, female, dark, fair, tall, short.

In time, he ventured further. He

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THE MAN WHO WAS BORN TWICE

was taken by car to art exhibitions where picture after picture leapt out to grab his attention, until his head reeled; to bookshops where titles in sudden and dizzying numbers bewildered him; to busy bazaars and colourful flower shows and a complicated cricket match; to church services, a wedding and a funeral; to an orchestral concert where the colour—of the people around, as well as of the music—quite overwhelmed him.

But there was just one thing Dennis couldn't manage—Christmas shopping. Seen for the first time, it left him a trembling wreck within minutes.

The diverse, quirky, unpredictable ways of his fellow human beings never ceased to surprise him. People viewed from an invalid's bed appeared mostly the same: polite, gentle, communicative. Out in the world, they were never the same. They were, for one thing, too busy with their own affairs to notice him at all. With amazement he watched people doing things he had never done, and probably could never hope to do: loading ships at the waterfront, sweeping chimneys, typing documents, building houses, doctoring trees. Everyone seemed to know what they were about; he was learning how little he knew. Absurdly simple things baffled him. How to mend a bicycle chain. How to cut up meat.

As he grew more sophisticated, he understood that he wasn't really

independent again, but just dependent on more people, as everyone was dependent on others. The difficulty was that he was no longer the stationary centre of his universe, but a moving centre, in a complex order with many others who were convinced they were the centre too.

Half-Way. That was how life shaped for Dennis in the 1950s as he regained the world, minute by minute, day by day, year by year. Yet for all the delight, it still wasn't an active life. One kilometre was his walking range. An excursion or two a week in a car was quite sufficient. His heart condition was alleviated, but not corrected.

He kept in touch with his friend and fellow blue baby Zoe Greenhough. She had been able to take an office job since her operation and to lead a far more strenuous life than he could. By then, Dennis was determined that should he ever be in a position to do so, he would marry Zoe. But he couldn't really support himself, let alone a wife.

In the late 1950s, he published his first book, a short and sensitively written account of his invalid years and emergence into the world again. It was highly praised and received an award for New Zealand's best prose work of the year. The final words in that book were, in a sense, prophetic: "My way in the world has only yet begun. I have many things to see and to know and to do and to grow . . ."

He had in truth only begun. For

READER'S DIGEST

fresh advances in heart surgery had made complete correction of his heart condition possible, and in 1961, at the age of 35, Dennis was once more admitted to Green Lane hospital.

The operation was a success. Almost overnight, Dennis's walking range became three or four kms; he could now move quite freely in the world for the first time in his life. Then, in 1962, he moved to Dunedin with his mother. And there, marvellously, he found himself able to take his first job—a two-hour daily stint in the office of Otago University's physical education department. When he finished in the office, he would exercise in the department's gymnasium.

Business Man. Before long, he was putting in four and then five hours daily in the office. And at home, apart from his own writing, he began to take on work from a publisher, reading and editing manuscripts. He could now put in as long and useful a day as most people.

Then Auckland University advertised a post—editor of the university's newly founded press; the applicants should have “an honours degree and a knowledge of languages.” Dennis had neither, only an indifferent primary-school education. But the university appointments committee, after considering

the reason for his spectacular lack of credentials, took the risk and gave him the job.

So life in full measure began at 41 for Dennis McEldowney. He took up his post as editor of Auckland University Press in 1967, and within months married Zoe Greenhough, some 17 years after their first meeting as blue babies. In the seven years since, he has established himself as a successful and enterprising editor—his press has become the most active and vital academic publisher in New Zealand.

Otherwise, he has settled for something most might see as an ordinary life: a nine-to-five day in the office, a flat in an Auckland seaside suburb, a wife at the dinner table. But for Dennis, it has never ceased to be extraordinary. Even the dullest day seems a gift; Dennis has never stopped wondering at the small marvels of life. A flower, sunlight on a tree, a bird on a branch, can still bring his day to a sudden standstill, and when he and Zoe explore a new place, they dart about hand in hand like excited youngsters rather than a middle-aged husband and wife.

Once, with some reason, people might have pitied Dennis McEldowney. Now, with even better reason, they might envy him his love of living.

Revisiting Old Haunts

THE last waltz at the annual dinner dance of the Union of Spiritualist Mediums was entitled “I'll see you again.”

—Daily Mirror, London

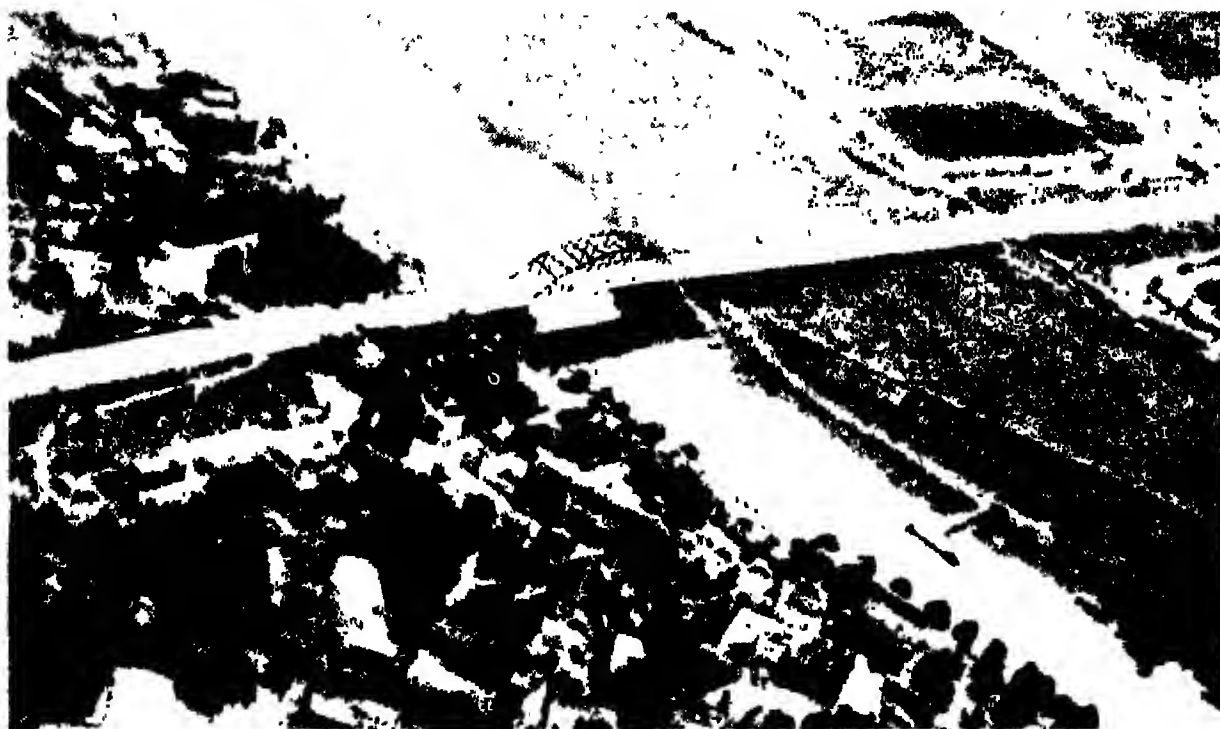


A BRIDGE TOO FAR

by Gordon R. Yell

A BRIDGE TOO FAR

by Cornelius Ryan



By September 1944, the war in Europe was moving to a close. Allied forces had raced across France and Belgium; everywhere German defences were crumbling. One bold thrust, Field-Marshal Montgomery was convinced, would open the way to Berlin, deal the knock-out blow, and prevent the war dragging on through another winter.

Thus he conceived Operation Market-Garden, a mighty airborne assault to seize a series of river crossings, notably the great Dutch road bridge over the Rhine at Arnhem. But as General "Boy" Browning had feared, it was to prove "a bridge too far." More Allied troops were killed in the fighting than in all the D-Day landings.

The story of those battles is one of sacrifice and high courage. To tell it, author Cornelius Ryan searched out 1,200 survivors, walked the battlefields, pored over reams of official reports and personal diaries. The resulting book, his last and according to many critics his best, is, says historian A. J. P. Taylor, "written with absolute mastery of the situation." Together with *The Longest Day* and *The Last Battle* it completes Ryan's trilogy of the great battles of the war. Here is the first of two instalments.

AT HIS spartan, tented headquarters in the Royal Palace Gardens, a few miles from the centre of Brussels, Field-Marshal Bernard Law Montgomery impatiently waited for an answer to his coded "Personal for Eisenhower Eyes Only" message. With British armies in Brussels and entering the port of Antwerp, a crucial turning point in the war had been reached. The Germans, Montgomery was convinced, were teetering on the verge of collapse. His nine-paragraph message, sent on September 4, 1944, spelt out his belief that the moment had come for a "really powerful and full-blooded thrust" with which he could not only reach the industrial Ruhr but race all the way to Berlin itself.

In the bedroom of his villa at Granville on the western side of the Cherbourg peninsula, the Supreme Commander, General Dwight Eisenhower, read Montgomery's signal with angry disbelief. Three times before, Montgomery had nagged him to exasperation about single-thrust schemes. Eisenhower, committed to a broad-front advance, thought he had settled the strategy conflict once and for all. Yet now Montgomery was not only advocating his theory again but was proposing to rush all the way to Berlin. Usually calm and congenial, Eisenhower lost his temper. "There isn't a single soul who believes this can be done, except Montgomery," he

exploded to members of his staff.

But Montgomery was not entirely alone in his views. All along the front the fever of success gripped battle commanders. After the spectacular sweep across France and Belgium and with evidence of German defeat all around, men now confidently believed that nothing could stop the victorious surge from continuing through the Siegfried Line and into the heart of Germany.

The chief problem with advancing was the lack of seaports. There was no shortage of supplies, but these were stockpiled in Normandy or the only workable port, Cherbourg—some 725 kms. behind the forward elements. Supplying four great armies in full pursuit from that far back was a nightmarish task. "To talk of marching to Berlin with an army still drawing the bulk of its supplies over the beaches is fantastic," Eisenhower said.

Nevertheless, Eisenhower was deeply disturbed at the widening rift between him and Britain's favourite general. Within the next few days, he decided, he would meet Montgomery. He set Sunday, September 10, as the date.

Anxious and determined, Montgomery waited at Brussels airport as Eisenhower's aircraft touched down. Because he had recently wrenched his knee, Eisenhower was unable to leave his plane, and the conference was held on board.

Almost at once, Montgomery

denounced the Supreme Commander's broad-front policy, arguing that Patton's drive to the Saar was being allowed to proceed at the expense of his own forces. So long as these two "jerky and disjointed thrusts were continued," with supplies split between himself and Patton, "neither could succeed." It was essential, Montgomery said, that Eisenhower decide between him and Patton. So fierce and unrestrained was Montgomery's language that Eisenhower suddenly reached out, patted Montgomery's knee and told him, "Steady, Monty! You can't speak to me like that. I'm your boss." Montgomery's anger vanished. "I'm sorry, Ike," he said quietly.

But doggedly, though with less acrimony, Montgomery continued to argue for his "single thrust." Eisenhower listened intently and with sympathy to the arguments, but his own view remained unchanged. His broad-front advance would continue. He told Montgomery clearly why. As Eisenhower was later to recall, he said, "What you're proposing is this—if I give you all the supplies you want, you could go straight to Berlin. Monty, you're nuts. If you try a long column like that in a single thrust you'd have to throw off division after division to protect your flanks. You can't do it."

Eisenhower's rejection was firm. The port at Antwerp, he stressed, must be opened before any major

drive into Germany could even be contemplated. Montgomery then played his trump card. The most recent development—the V-2 rocket attacks on London from sites in the Netherlands—necessitated an immediate advance into Holland. He knew exactly how such a drive should begin. His plan was an expanded, grandiose version of an earlier plan, Operation Comet, calling for one and a half divisions, which had been cancelled. Montgomery proposed to use almost the entire newly formed 1st Allied Airborne Army, under the command of Lieutenant-General Lewis Hyde Brereton—three and a half divisions—in a stunning mass attack.

The airborne forces were to seize a succession of river crossings in Holland ahead of his troops, with the major objective being the Lower Rhine bridge at Arnhem. This surprise attack would open a corridor northwards for the tanks of Lieutenant-General Miles Dempsey's British 2nd Army, which would race across the captured bridges to Arnhem and over the Rhine. Then Montgomery hoped to wheel east, outflank the Siegfried Line and race into the Ruhr. Once over the Rhine, Montgomery did not see how the Supreme Commander could halt his drive.

Eisenhower was intrigued and impressed. It was a bold, brilliantly imaginative plan, exactly the kind of mass attack he himself had been seeking for his long-idle airborne

divisions. But now the Supreme Commander was caught between the hammer and the anvil. If he agreed to the attack, the opening of Antwerp would have to be delayed and supplies diverted from Patton. Yet if he turned down Montgomery's proposal, he would miss the opportunity to revitalize the swift advance and perhaps propel the pursuit across the Rhine. Fascinated by the audacity of the plan, Eisenhower gave his approval.

Yet the Supreme Commander stressed the attack was to be a "limited" one. He told Montgomery that he considered the airborne-ground operation "merely an extension of the advance to the Rhine and the Ruhr." As Eisenhower

remembered it, he said to Montgomery, "I'll tell you what I'll do, Monty, I'll give you whatever you ask . . . but let's get over the Rhine first before we discuss anything else."

After Eisenhower's departure, Montgomery outlined the proposed operation on a map for Lieutenant-General Frederick Browning, deputy commander of the 1st Allied Airborne Army. Browning saw that the airborne forces were being called upon to secure a series of crossings—five of them major bridges, including those spanning the wide rivers of the Maas, the Waal and the Lower Rhine—over a stretch approximately 103 kms. long between the Belgian-Dutch border and

Field-Marshal Montgomery and General Eisenhower watch training exercise



KEYSTONE PRESS

Arnhem. Also, they were charged with holding open the corridor—in most places a single road running north—over which British armour would drive. The dangers were obvious, but this was precisely the kind of surprise assault for which the airborne forces had been trained. Still, Browning was uneasy. Pointing to the most northern bridge over the Lower Rhine at Arnhem, he asked, "How long will it take the armour to reach us?"

Montgomery replied briskly, "Two days."

Still intent on the map, Browning said, "We can hold it for four." Then he added, "But, sir, I think we might be going a bridge too far."

Key Operation

THE embryo concept (which thereafter would bear the code-name Operation Market-Garden—Market covering the airborne drop and Garden for the armoured drive) was to be developed with the utmost speed. Although opposition before Montgomery's troops had stiffened, he believed that the Germans in Holland, behind the hard crust of their front lines, had little strength. Allied intelligence confirmed his estimate. None the less, Montgomery insisted that the attack be launched in a few days. Otherwise, it would be too late. Confidently he set Sunday, September 17, as D-Day.

Carrying Montgomery's skeleton plan, Browning flew to England

immediately. On landing, he notified Brereton, and within hours of Eisenhower's decision, Brereton was briefing 27 senior officers on the greatest airborne operation ever conceived.

To invade Holland from the sky, Brereton planned to land almost 35,000 men—nearly twice the number of paratroops and glider-borne infantry used in the invasion of Normandy—complete with vehicles, artillery and equipment. To help carry the huge force to targets 500 kms. away, he would have to use every glider in his command—an immense fleet of more than 2,500.

The gliders would bring in a third of the 35,000-man force; the rest would drop by parachute. Swarms of fighter squadrons from all over Britain—more than 1,500 planes—would be needed to escort the airborne fleet. In all, almost 5,000 aircraft of all types would be involved. To avoid the confusion created by darkness, the general decreed that the assault would take place in daylight. It was an unprecedented decision.

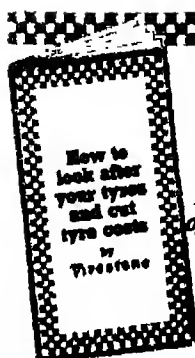
Brereton appointed General Browning to command the giant operation. Browning, also commander of the 1st British Airborne Corps and one of Britain's pioneer airborne advocates, was optimistic, believing that this single operation held the key to the end of the war.

The most crucial decision of all: Brereton was forced to tailor the plan to existing airlift capability. He

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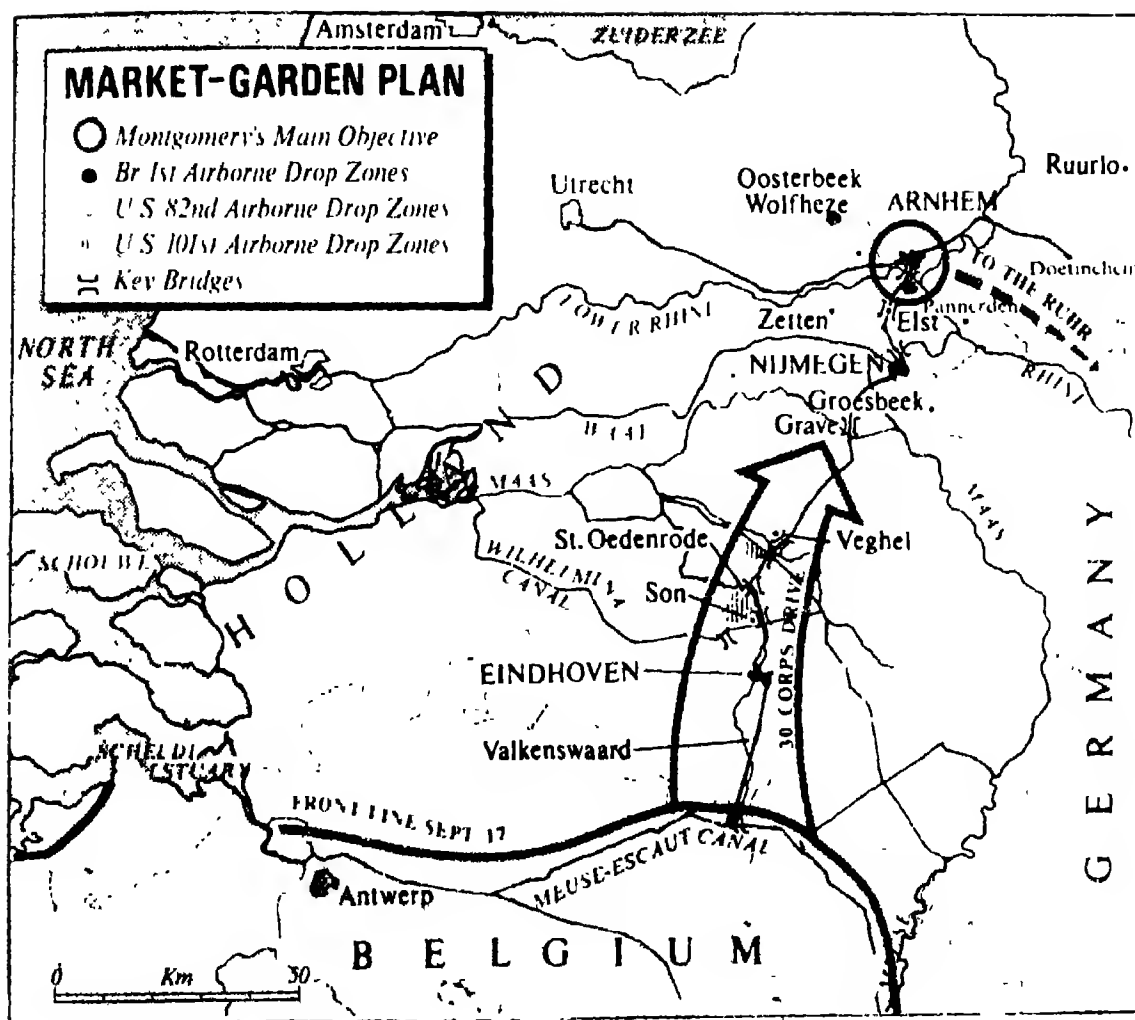
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must transport his force in instalments, flying the three and a half divisions to their targets over a period of three days. The risks were great: German reinforcements might reach Market-Garden faster than anyone anticipated—and there was always the possibility that bad weather would delay the second and third drops. In Brereton's opinion such risks had to be accepted.

Two of the divisions in the attack were American. Almost directly ahead of the armoured thrust attacking across the Belgian-Dutch border, Major-General Maxwell

Taylor's 101st Airborne Division was to capture canal and river crossings over a 24-km. stretch between Eindhoven and Veghel. North of them, Brigadier-General James Gavin's 82nd Division was charged with the area between Grave and Nijmegen.

The single most important objective was the great concrete and steel bridge over the Lower Rhine at Arnhem. Its capture was assigned to the British "Red Devils" and the Poles—Major-General Robert Urquhart's 1st Airborne Division and Major-General Stanislaw

Sosabowski's 1st Polish Parachute Brigade. Browning had chosen Urquhart, a 182-cm. Scotsman, because he was "hot from battle," having served with great distinction in North Africa, Sicily and Italy. Arnhem was the prize. Without the Rhine crossing, Montgomery's bold stroke to liberate Holland, outflank the Siegfried Line and springboard into Germany would fail.

Urquhart's assignment presented one particularly worrying problem. The terrain around the bridge was either marshy or built-up and populated, and guarded by anti-aircraft weapons. Reluctantly, Urquhart decided on landing zones in some broad pastures, west and north-west of Arnhem. They were ideal in every way except one: they lay nine to 12 kilometres from the Arnhem bridge.

General Gavin was so astonished when he heard of Urquhart's choice of landing sites that he said to his operations chief, "My God, he can't mean it." Still, Gavin said nothing. "I assumed that the British, with extensive combat experience, knew exactly what they were doing."

General Sosabowski also had grave misgivings. To reach the bridge the troops would have "a five-hour march; so how could surprise be achieved? Any fool of a German would immediately know our plans." Sosabowski told General Browning that it would be suicide to attempt the mission without additional forces. Browning

answered, "But, my dear Sosabowski, the Red Devils and the gallant Poles can do anything!"

Discounting the Doubts

Not everyone shared this certainty. At least one of Montgomery's senior officers had reason to be worried. General Dempsey, commander of the British 2nd Army, unlike the Field-Marshal, did not dispute the authenticity of several recent Dutch resistance reports, which indicated rapidly increasing German strength between Eindhoven and Arnhem, the very area of the planned airborne drop.

There was even a Dutch report that "battered panzer formations have been sent to Holland to refit," and these too were said to be in the Market-Garden area. Dempsey sent this news to Browning's Airborne Corps, but the information lacked any endorsement by Montgomery or his staff, and in the prevailing mood of optimism, the report was completely discounted.

Major Brian Urquhart (no relation to the general) was equally disturbed by the optimism permeating the 1st Airborne Corps. Almost alone, the 25-year-old intelligence chief gave credence to Dempsey's report. Admittedly, the information was vague, but he had been receiving similar disquieting news from Dutch liaison officers at Corps headquarters. Adding his own information to Dempsey's, Major Urquhart felt reasonably certain

that elements of at least two panzer divisions were somewhere in the Arnhem area. The units were unidentified, with strength unknown, and he could not tell whether they were being refitted or merely passing through. Nevertheless, Urquhart, as he later recalled, "was really shaken."

Frankly, he was "horrified by Market-Garden, because its weakness seemed to be the assumption that the Germans would put up no effective resistance." The whole essence of the scheme, as he saw it, "depended on the unbelievable notion that once the bridges were captured, the tanks could drive up this abominably narrow corridor—which was little more than a causeway, allowing no manoeuvrability—and then walk into Germany like a bride into church. I simply did not believe that the Germans were going to roll over and surrender."

On the afternoon of September 12, Major Urquhart requested low-level RAF reconnaissance sweeps of the Arnhem area. Photographs of tanks, if they were there, might prove that his doubts were justified.

On the 15th, with Operation Market-Garden less than 48 hours away, Major Urquhart finally got what he was looking for—five oblique-angle photographs showing the unmistakable presence of tanks in the Arnhem area.

He rushed to General Browning's office. Placing the pictures on the desk, Urquhart said, "Take a look

at these." The general studied them one by one, and then, to the best of Urquhart's recollection, said, "I wouldn't trouble myself about these." And referring to the tanks, he continued, "They're probably not serviceable at any rate."

Urquhart was stunned. "Everyone was so gung-ho to go that nothing could stop them."

Almost simultaneously, across the Channel in France, Lieutenant-General Walter Bedell Smith, Eisenhower's chief of staff, listened to his intelligence head, British Major-General Kenneth Strong. Beyond doubt, Strong said, there was German armour in the Arnhem area. Dutch underground messages even identified the units as the 9th and 10th SS Panzer Divisions. Both were badly damaged, but it was considered unlikely that they had been completely destroyed.

Smith immediately conferred with Eisenhower. The British 1st Airborne Division, due to land at Arnhem, "could not hold out against two armoured divisions," he said, and recommended that Market-Garden be reinforced.

Eisenhower considered his options. First, he could over-ride Monty's plan and add reinforcements to it. But that meant challenging Montgomery's generalship and upsetting an already delicate command situation. Or, he could cancel Market-Garden—on the basis of this single piece of intelligence.

Eisenhower explained to Smith:

"I cannot tell Monty how to dispose his troops," nor could he "call off the operation, since I have already given Monty the green light." If changes were to be made, Montgomery would have to make them himself.

Bedell Smith set out immediately for Brussels. He found Montgomery confident and enthusiastic. Smith explained his fears and strongly suggested revising the plan. Montgomery "ridiculed the idea. All would go well, he kept repeating, if we would help him surmount his logistical difficulties. He was not worried about German armour." The conference was fruitless. "At least I tried to stop him," Smith said. "But I got nowhere. Montgomery simply waved my objections airily aside."

All Systems Go

At eight British and 16 American air bases the paratroopers and glider-borne infantry of the 1st Allied Airborne Army were marshalled. Over the previous 48 hours, using maps, photographs and scale models, officers had briefed and re-briefed their men. The vast fleets of troop-carrying aircraft, tow planes and gliders were checked out, fuelled, and loaded with equipment ranging from artillery to jeeps.

Now that Market-Garden was actually on, Lieutenant-Colonel Louis Mendez, battalion commander of the American 82nd's 508th Regiment, had no hesitation in

speaking out on one particular subject. "Gentlemen," Mendez coldly warned the pilots who would carry his battalion into action, "my officers know this map of Holland and the drop zones by heart and we're ready to go. When I brought my battalion to the briefing prior to Normandy I had the finest force of its size that will ever be known. By the time I gathered them together in Normandy, half were gone. I charge you: put us down in Holland or put us down in hell, but put us all down together."

From Supreme Command headquarters down, senior officers anxiously awaited the meteorological reports. A minimum forecast of three full days of fair weather was needed. In the early evening of September 16, the weather experts issued their findings: apart from some early-morning fog, the weather the next three days would be fair. At 1st Allied Airborne Army headquarters, General Brereton quickly made his decision: "Confirm Market-Garden Sunday 17th. Acknowledge."

In crowded hangars, cities of tents and Nissen huts, the waiting men were given the news. On a large mirror over the fireplace in the sergeants' mess of the British 1st Airborne Division Signals near Grantham, Lincolnshire, someone chalked up "14 hours to go . . . no cancellation." As each hour passed, the number was rechalked.

There was little now for the men

to do but wait. Some spent the time writing letters, packing personal belongings, sleeping or playing marathon card games. Twenty-year-old Sergeant Francis Moncur, of the 2nd Battalion 1st Parachute Brigade, played blackjack with invasion money hour after hour. To his surprise, he won steadily. Looking at the ever-growing pile of Dutch guilders before him, Moncur felt like a millionaire. He expected to have a "whale of a time in Arnhem after the battle," which, in his opinion, would "last only 48 hours."

At Manston, Kent, Sergeant George Baylis of the Glider Pilot Regiment was looking forward to some recreation. He had heard that the Dutch liked to dance; so George carefully packed his dancing shoes.

Another man was taking presents that he had bought in London a few days earlier. When the Netherlands was overrun by the Germans, 32-year-old Lieutenant-Commander Arnoldus Wolters of the Dutch Navy had escaped in his minesweeper to England. A few days earlier, Wolters had been asked to go to Holland as part of the military government and civil-affairs team attached to General Urquhart's headquarters. "I expected to land on Sunday and be home on Tuesday with my wife and child at Hilversum." For his wife, Maria, Wolters had bought a watch, and for his daughter, whom he had last

seen as a baby four years before, he had a half-metre teddy bear. He hoped nobody would mind if he took it in the glider.

Lieutenant-Colonel John Frost, 31, who was to lead one of the battalions assigned to capture the Arnhem bridge, packed his copper hunting horn with the rest of his battle gear. It had been presented to him by members of the Royal Iraqi Exodus Hunt, of which he was Master in 1939-40. During training, Frost had used the horn to rally his men. He would do so on this operation.

On the mirror above the fireplace in the sergeants' mess, now empty, there was one last notation, scrawled before the men became too busy to bother. It read. "2 hours to go . . . no cancellation."

Airborne Armada

THE thunder of the huge formations was earsplitting. Around glider bases in Oxfordshire and Gloucestershire, horses and cattle panicked and bolted in the fields. Everywhere people gaped, dumbfounded, at a spectacle no one had ever seen before. The mightiest airborne force in history was off the ground and heading for its targets.

To the onlookers, the nature of the attack was clearly revealed. A Red Cross worker, Angela Hawkins, may have best summed up the reactions of those who saw the vast armada pass. From the window of a train, she stared up, astonished,

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as wave after wave of planes flew over like "droves of starlings." She was convinced that "this attack, wherever bound, must surely bring about the end of the war."

The operation began in the pre-dawn hours and continued throughout the morning. First, more than 1,400 Allied bombers had pounded German anti-aircraft positions and troop concentrations in the Market-Garden area. Then, at 9.45 and for two and a quarter hours more, 2,023 troop-carrying planes, gliders and their towing planes swarmed into the air. Swaying among the smaller Horsa and Waco gliders were massive Hamilcars, each with a cargo capacity of eight tons. Above, below and on the flanks were the fighters and fighter-bombers. By 11.55 a.m., the entire force—more than 20,000 troops, 511 vehicles, 330 artillery pieces and 590 tons of equipment—was aloft.

Mishaps occurred almost immediately, and by the time the last of the sky trains reached the English coast 30 gliders were down. Engine failure, broken tow ropes and, in places, heavy clouds had caused the aborts. Unfortunately, 23 of them belonged to General Urquhart, who was to drop on Arnhem.

Over the English Channel, eight more gliders ditched; once they were on the water, the air-sea rescue service, in a spectacular performance, saved nearly all crews and passengers. Again, Urquhart's force was whittled down. Of the eight

gliders, five were Arnhem-bound.

As the Dutch coastline appeared in the distance, the American 82nd Airborne and the British soldiers in the northern columns began to see ominous tell-tale grey and black puffs of flak—German anti-aircraft fire. Escorting fighters began peeling out of formation, engaging the gun positions. In the planes men could hear spent shrapnel scraping against the metal sides of the C-47s.

Old hands hid their fears in various ways. When Staff Sergeant Paul Nunan saw the "familiar golf balls of red tracer bullets weaving up towards us," he pretended to doze off. Sergeant Bill Tucker, who had gone through anti-aircraft fire in Normandy, was haunted by a "horrible fear of getting hit from underneath." He felt "less naked" sitting on three Air Force flak jackets.

Although the escort fighters silenced most of the coastal flak positions, some planes were damaged and one towing plane, its glider and a troop-carrier C-47 were shot down over Schouwen Island. The towing plane crash-landed, and its crew were killed. The glider, an 82nd Airborne Waco, broke up in mid-air. Major Dennis Munford, flying in a British column near by, watched, aghast, as the Waco disintegrated and "men and equipment spilt out of it like toys from a Christmas cracker."

Incredibly, despite the night's widespread bombing, and continuing aerial attacks against Arnhem,

Nijmegen and Eindhoven, the Germans failed to realize what was happening. Field-Marshal Walter Model, in his headquarters at Oosterbeek, had been watching the bomber formations for some time. Opinion at headquarters was unanimous: the squadrons of Flying Fortresses were returning from their nightly bombing of Germany and, as usual, other streams of Fortresses were heading east for other targets in the never-ending bombing of Germany. As for the local bombing, it was not uncommon for planes to jettison unused bombs over the Ruhr and often, as a result, into Holland.

Over Arnhem at 11.30 a.m., columns of black smoke rose in the sky as fires burned throughout the city in the aftermath of a three-hour, near-saturation bombing. In Wolfheze, Oosterbeek, Nijmegen and Eindhoven, buildings were flattened, streets were cratered and littered with debris and glass, and casualties were mounting by the minute. The mood of the Dutch, huddling in churches, cellars and shelters or, with foolhardy courage, cycling the streets or staring from rooftops, alternated between terror and exultation.

Close by the hamlet of Zeelst, approximately eight kms. west of Eindhoven, Gerardus de Wit had taken shelter in a beet field during the bombings. Now, he was frantic to get back to his wife and their 11 children. As he neared Zeelst, he

noted that bombs presumably intended for the airfield outside Eindhoven had fallen, instead, directly on the little village. De Wit could see nothing but ruins. Several houses were burning, others had collapsed; and people stood about dazed and crying.

Then he saw his wife, Adriana, running to him. "Come quickly," she told him. "Our Tiny has been hit." "When I got to him," De Wit said, "I saw that the whole of his right side was open and his right leg was cut almost through. His right arm was missing. He asked me about his arm and, to comfort him, I said, 'You're lying on it.'" Cradling the boy, De Wit set out for a Red Cross post. Before he reached it, his 14-year-old son had died in his arms.

Meeting the Enemy

PRIVATE John Cipolla, of the US 101st Airborne, was dozing when he was suddenly awakened as "the shrapnel ripped through our plane." Like everyone else, Cipolla was so weighted down by equipment that he could hardly move. Besides his rifle, knapsack, raincoat and blanket, he had ammunition belts draping his shoulders, pockets full of hand grenades, rations, and his main parachute and a reserve. In addition, in his plane, each man carried a land mine. As he recalls, "A C-47 on our left flank burst into flames, then another, and I thought, *My God, we are next! How will*

I ever get out of this plane!"

The jumpmaster gave the order, "Stand up and hook up." Then he calmly began an equipment check. It seemed hours before the green light went on and, in a rush, the men were out and falling, parachutes blossoming above them. Looking up to check his canopy, Cipolla saw the C-47 he had just left go down in flames.

But in spite of the bursting shells that engulfed the planes, the pilots held to their courses without deviating.

To General Taylor, the 101st jump was "unusually successful; almost like an exercise." In the initial planning, his staff had anticipated casualties as high as 30 per cent. Of the 6,695 paratroopers who had boarded planes in England, 6,669 actually jumped. Despite the intense flak, the bravery of the C-47 and fighter pilots gave the 101st an almost perfect jump. But out of the 424 C-47s carrying the 101st, every fourth plane was damaged, and 16 went down, killing their crews.

First-Lieutenant James Coyle, of the US 82nd Airborne, thought he was heading for a landing on a German tent hospital. Suddenly, enemy troops poured out of the tent and began running for 20-mm. anti-aircraft guns round the perimeter. One of the Germans moved in Coyle's direction, and Coyle worked his .45 from its holster, but couldn't get off a shot. On the ground, Coyle drew his pistol once

more. "The Kraut was now only a few metres away, but he was acting as though he didn't know I existed. Suddenly I realized that he was running away." As the German hurried past Coyle, he threw away his gun and helmet, and Coyle could see "he was only a kid, about 18 years old. I just couldn't shoot an unarmed man. The last I saw of the boy he was running for the German border."

When tracer bullets began ripping through his parachute, Private Edwin Raub became so enraged that he deliberately sideslipped his chute so as to land next to the anti-aircraft gun. Dragging his parachute behind him, Raub rushed the Germans with his Tommy gun. He killed one, captured the others and then, with plastic explosives, destroyed the flak-gun barrels.

Although enemy opposition in the Groesbeek area was officially considered negligible, a considerable amount of anti-aircraft and small-arms fire came from the woods surrounding the drop zones. Without waiting to assemble, 82nd soldiers, individually and in small groups, swarmed over these pockets of resistance, quickly subduing them and taking prisoners. Simultaneously, fighter planes skimmed over trees, machine-gunning enemy emplacements. The Germans scored heavily against them.

Within 18 minutes, 4,511 men of the 82nd's 505th and 508th regiments, along with engineers

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and 70 tons of equipment, were down on or near their drop zones straddling the town of Groesbeck. Glider-borne troops brought the total to 7,467.

Crucial Breakdown

MEANWHILE, to the north, surrounded by ground haze and the smoke and fire of burning buildings, the mighty British glider fleet was landing. Blue smoke eddied up from the two landing zones. From these zones, towing planes and gliders stretched back almost 30 kilometres

Many gliders, having surmounted all the hazards of the trip, touched down to disaster. Staff-Sergeant George Davis stood near his empty Horsa and watched another Horsa rumble in. It ploughed into a nearby wood. No one got out. Davis ran to the glider and looked into the cockpit. Everyone inside was dead. A 75-mm. howitzer had broken from its chain mooring, crushing the gun crew and decapitating the pilot and co-pilot.

General Urquhart was struck by the stillness. "It was," he recalls, "incredibly quiet. Unreal." While his chief of staff set up the division's tactical headquarters at the edge of the woods, Urquhart headed for the parachutedropping zones, 400 metres away. It was nearly time for Brigadier Gerald Lathbury's 1st Parachute Brigade to arrive.

The first person Sergeant Norman Swift saw when he landed was

Sergeant-Major Les Ellis holding a dead partridge. The amazed Swift asked where the bird had come from. "I landed on it," Ellis said. "It'll be a bit of all right later on, in case we're hungry."

Dazed after a hard fall, Lieutenant Robin Vlasto lay still for a few moments, trying to orientate himself. He was conscious of "an



Major-General Robert Urquhart

incredible number of bodies and containers coming down all around me as planes continued to pour out paratroopers." Then, as he struggled to get out of his harness, he heard a weird sound. Looking round, he saw Colonel Frost walking past blowing his copper hunting horn.

All over the drop and landing

zones, where 5,191 men of the division had arrived safely, units were assembling, forming up and moving out. General Urquhart "couldn't have been more pleased. Everything appeared to be going splendidly."

IN all the panic and confusion, the first German senior officer to raise the alert was General Wilhelm Bittrich, commander of the 2nd SS Panzer Corps. At 1.30 p.m. he received the first report that airborne troops were landing near Arnhem. Immediately, he alerted Lieutenant-Colonel Walter Harzer of the 9th Panzer Division and ordered him to reconnoitre in the direction of Arnhem and Oosterbeek. At the same time, he ordered the 10th Panzer Division to move towards Nijmegen, "to take, hold and defend the city's bridges." The panzer units that Montgomery had totally dismissed had been set in motion.

MAJOR Anthony Deane-Drummond, second in command of the British 1st Airborne Division Signals, could not understand what was wrong. At one moment his radio sets were getting perfect reception from Brigadier Lathbury's brigade as it headed for its objectives, including the Arnhem bridge. But now the radio signals were fading until they were hardly audible.

Lathbury's messages were vital to General Urquhart in his direction of the battle. Deane-Drummond decided to send out a jeep with a radio

and operator to pick up Lathbury's signals and relay them back to Division. A short time later, he heard signals from the relay team. The range of their set seemed drastically reduced, and the signal faint. Even as he listened, the signal faded completely. Deane-Drummond was unable to raise anybody.

Nor was a special team of American communications operators with two radio jeeps. Hastily assembled and rushed to British Airborne Division headquarters only a few hours before take-off, the Americans were to operate ground-to-air "very high frequency" sets to call in fighters for close support. In the first few hours of the battle, these radio jeeps might have made all the difference. Instead, they were useless. Neither jeep's set had been adjusted to the necessary frequencies. With the battle barely begun, British radio communications had totally broken down.

Deadly Ambush

FROM the flat roof of a factory near the Meuse-Escaut Canal on the Dutch-Belgian border, Lieutenant-General Brian Horrocks, commander of the British 30 Corps, watched the last of the huge airborne-glider formations pass over his waiting tanks. Satisfied the airborne assault had now begun, Horrocks gave the order for the Garden forces to attack. At 2.15 p.m., with a thunderous roar, some 350 guns opened fire.

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the enemy positions up ahead. The hurricane of fire, ranging eight kms. in depth and concentrated over a two km. front, caused the earth to shake beneath the tanks of the Irish Guards as they lumbered up to the starting line. Behind the lead squadrons, hundreds of other tanks and armoured vehicles began to move out of their parking positions.

The tanks rumbled and clanked up the road at 12 kms. an hour. The curtain of artillery fire lifted to creep ahead of the armour at exactly the same speed. Tank crews could see shells bursting barely 100 metres in front of them.

Behind the lead squadrons came the scout car of Lieutenant-Colonel Joe Vandeleur. Standing, Vandeleur could see both in front of and behind him. "The din was unimaginable," he remembers, "but everything was going according to plan." Then, in seconds, the picture changed. As Vandeleur recalls, "The Germans really began to paste us."

Ensnared in well-hidden, fortified positions on both sides of the road, German gunners had waited until the barrage passed over them, letting the first few tanks go through. Then they opened fire. Suddenly, within two minutes, nine tanks were knocked out of action. Burning and disabled, they littered a kilometre of road.

The break-out had been stopped before it had really begun. Squadrons coming up could not advance. Even if they could bypass the

burning hulks, hidden German gunners would pick them off. To get the advance rolling again, Vandeleur called in the rocket-firing Typhoons circling overhead.

"I was amazed at the guts of those pilots," Vandeleur recalls. "They came in, one at a time, head to tail, flying right through our own barrage. One disintegrated right above me. It was incredible—guns firing, the roar of planes, the shouts and curses of the men."

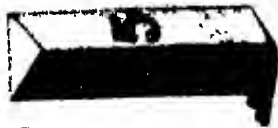
As the planes swooped down, Vandeleur sent forward an armoured bulldozer to push the burning tanks off the road. Then infantry moved up to clean out the woods with two Bren-gun carriers. A tank commander remembers seeing "both carriers catapulted into the air. They had run over enemy land mines." When the smoke cleared, he saw "bodies in the trees—pieces of men hanging from every limb."

Grimly, the British infantry began to dig out the Germans from their hidden trenches. The Irish Guardsmen showed no quarter. Prisoners were made to double-time down the road, prodded with bayonets. One German tried to break away. "He was dead the second the thought entered his mind," an infantryman recalls.

As Vandeleur watched the prisoners being marched past his car, he caught a sudden movement. "The bastard had taken a grenade he'd concealed and lobbed it into one of our gun carriers. It went off

Milestones to Mangala fertilizer-5

Shrimati Indira Gandhi visits MCF's Panambur fertilizer complex



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This progress on site is particularly remarkable when it is recalled that the last of the heavy manufacturing equipments for MCF arrived just six weeks ago, by sea.

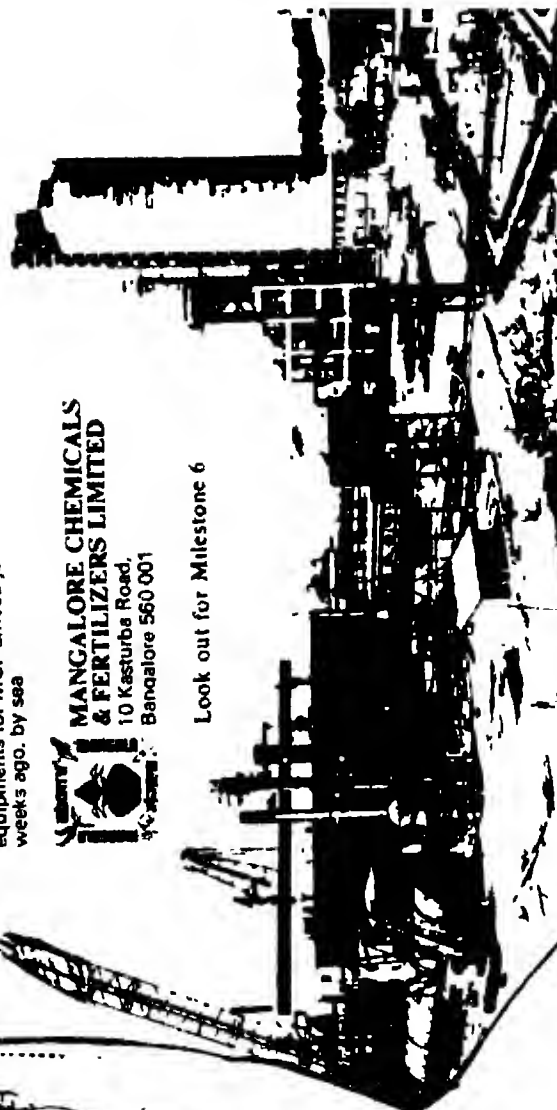
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with a tremendous explosion, and I saw one of my sergeants lying in the road with his leg blown off. The German was cut down on all sides by machine-guns."

At his command post, General Horrocks received word that the Germans had been routed on the flanks. But the German crust was far tougher than anyone had anticipated. Among the prisoners were men of renowned parachute battalions and—to the complete surprise of the British—veteran infantrymen from the 9th and 10th SS Panzer divisions. To compound the surprise, some prisoners were discovered to belong to General Gustav von Zangen's 15th Army. As the Irish Guards' war diary notes, "Our intelligence spent the day in a state of indignant surprise: one German regiment after another appeared which had no right to be there."

General Horrocks had expected that his leading tanks would drive the 21 kms. to Eindhoven "within two to three hours." Precious time had been lost, and the Irish Guards covered only 11 kilometres, reaching Valkenswaard by nightfall. Market-Garden was already ominously behind schedule.

Running Battles

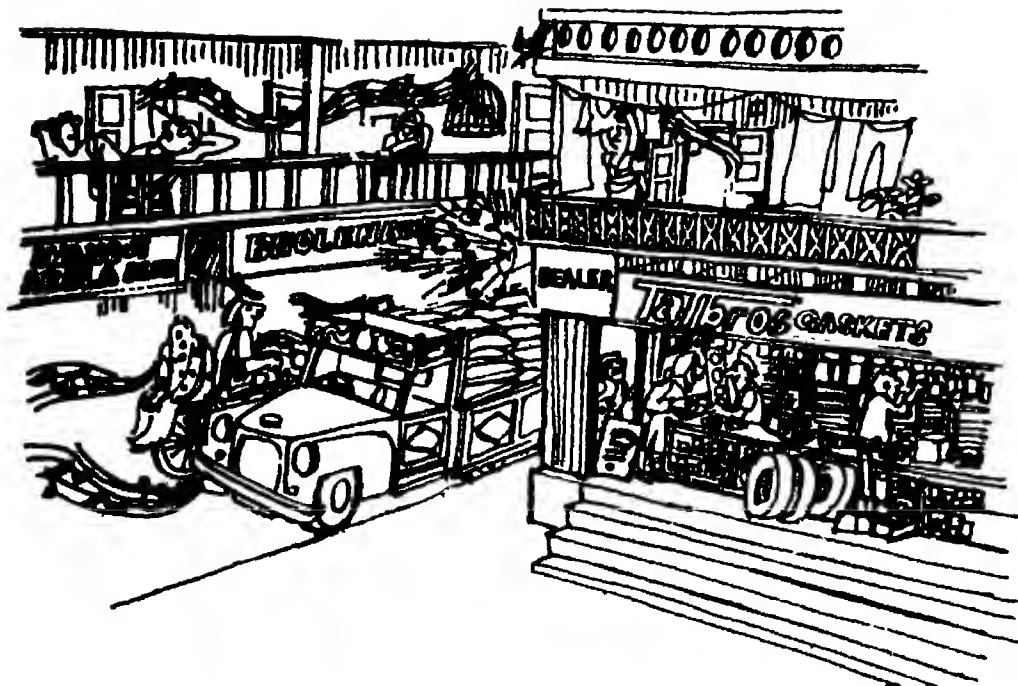
IN their camouflaged battle-dress and distinctive helmets, laden with weapons and ammunition, the men of Brigadier Lathbury's 1st Parachute Brigade were on the way to Arnhem. The plan called for the

three battalions of his brigade to converge on Arnhem, each from a different direction. Colonel Frost's 2nd Battalion was given the prime objective. Marching along a secondary road running close to the north bank of the Lower Rhine, they were to capture the main road bridge. En route, they were to take the railway and pontoon bridges west of it.

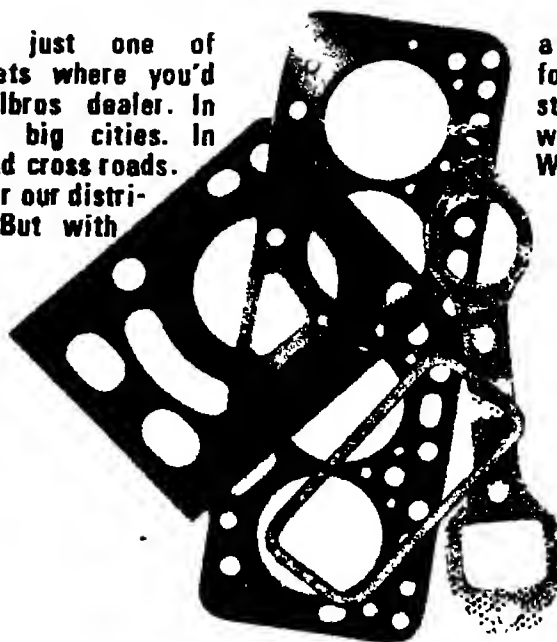
The 3rd Battalion, under Lieutenant-Colonel Fitch, would approach the bridge from the north, reinforcing Frost. Once these two battalions had been successfully launched, Lieutenant-Colonel Dobie's 1st Battalion was to advance along the most northerly route and occupy the high ground north of the city.

All along the three routes, the men encountered jubilant throngs of Dutch people. Many civilians from farms and outlying hamlets had followed the paratroopers from the time they left the landing zones. Captain Eric Mackay, travelling the southernmost route with Colonel Frost's 2nd Battalion, was disturbed by the holiday atmosphere. "We were hampered by Dutch civilians," he says. "Waving, cheering and clapping, they offered us apples, pears, something to drink. But they interfered with our progress and filled me with dread that they would give our positions away."

As Mackay feared, the victory parade came to a sudden halt. Sergeant-Major Harry Callaghan, on

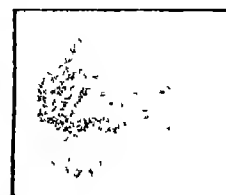


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A BRIDGE TOO FAR

the middle route, remembers, "It all happened so quickly. One moment we were marching steadily towards Arnhem; the next, we were scattered in the ditches. Snipers had opened fire, and three dead soldiers lay across the road." Many men recall that the first serious German opposition began after the first hour of the march at around 4.30 p.m. Two of the three battalions—Dobie's, on the northern route, and Fitch's, in the centre—were unexpectedly engaged in fierce enemy attacks. As Dobie's 1st Battalion approached Wolfheze, it was almost completely stopped.

"We halted," Private Walter Boldock recalls. "Then we started off again. Then we halted and dug in. Next, we moved on again, changing direction. Our progress was dictated by the success of the lead companies. Mortar bombs and bullets harassed us all the way."

The paratroopers were stunned by the ferocity of the unanticipated enemy attacks. Private Andrew Milbourne, on the northern route, heard firing in the distance off to the south and was momentarily glad that his 1st Battalion had been given the assignment to hold the high ground north of Arnhem. Then, nearing Wolfheze, Milbourne realized that the column had swung south off the main road. He saw the railway station and, close to it, a tank. His first reaction was one of elation. *My God!* he thought. *Monty was right. The*

Second Army's here already! Then, as the turret swung slowly round, Milbourne saw that a black cross was painted on the tank. Suddenly, he seemed to see Germans everywhere.

Hampered by the breakdown of communications and subsequent lack of direction, the men of the 1st and 3rd battalions were engaging in



Lieutenant-Colonel John Frost

constant skirmishes. Hardened and desperate Waffen SS men, inferior in numbers but bolstered by half-tracks, artillery and tanks, were reducing the British advance on the two upper roads to a crawl, and there was little chance that the 1st and 3rd battalions could reach their Arnhem objectives as planned. Now everything depended upon Colonel Frost's 2nd Battalion,

moving steadily along the Lower Rhine road, the secondary route the Germans had largely dismissed.

Gaining Ground

ALTHOUGH Frost's battalion had been held up briefly several times by enemy fire, he had pressed forward to the first objective, the railway bridge over the Lower Rhine slightly south-east of Oosterbeek. According to plan, Major Victor Dover's C Company peeled off and headed for the river. The bridge looked empty and undefended as they approached. Lieutenant Peter Barry, 21, was ordered to take his platoon across.

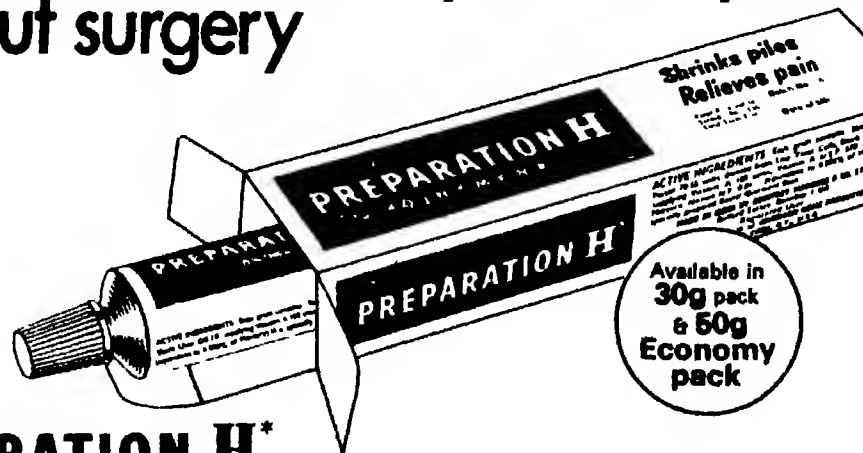
Barry's platoon was within 300

metres of the bridge when he saw "a German run on to the bridge from the other side. He reached the middle, knelt down and started doing something. I told one section to open fire and a second section to rush the bridge."

Barry recalls that they "got on to the bridge and began racing across at full speed. Suddenly, there was a tremendous explosion and the bridge went up in our faces." One of the three bridges was gone.

There was more disappointment in store. When they reached the pontoon bridge they found that the centre section had been removed. But, barely 1.5 kms. away, the great span of the main bridge was

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silhouetted against the last light.

As leading elements of the 2nd Battalion neared the bridge, Lieutenant Vlasto, in command of one of A Company's platoons, was amazed by "its incredible great height." Vlasto noted "pillboxes at each end and, even in the general air of desertion, they looked threatening." In darkness, A Company took up positions beneath the huge supports at the north end. From above came the rumble of traffic.

Shortly after 8 p.m., Colonel Frost and the battalion headquarters arrived. He at once ordered A Company on to the bridge. As the men began to move across, the Germans came to life. Troops were raked with fire from the pillbox at the northern end and by a lone armoured car on the southern end.

A platoon, aided by Eric Mackay's sappers carrying flamethrowers, began to move through the top floors of houses whose roofs and attics were at eye level with the ramp. Simultaneously, Lieutenant Vlasto's platoon worked its way through basements and cellars. In position, they attacked the pillbox.

As the flamethrowers went into action, Frost recalls that "all hell seemed to be let loose. The sky lit up, and there was the noise of machine-gun fire, a succession of explosions, the crackling of burning ammunition and the thump of a cannon. A wooden building near by was wreathed in flames, and

there were screams of agony and fear."

Suddenly, the brief, savage battle was over. The guns in the pillbox fell silent and, through the fires, Frost saw German soldiers staggering towards his men. A Company had successfully cleared the north end of the bridge and it was theirs. But fires and exploding ammunition made it suicidal to risk a second rush to grab the southern side. Only half an hour earlier, Frost could have succeeded. But now, on the south bank, a group of SS Panzer Grenadiers had taken up positions.

There was little more that Frost could do that night, except to guard the northern end of the bridge from enemy attacks. After conferring with his officers, Frost thought it was now obvious that the 1st and 3rd battalions had both been held up. Without communications, it was impossible to tell what had happened. But if the two battalions did not reach Arnhem during the hours of darkness, the Germans would have the precious time necessary to close the area between Frost's men and the rest of the division.

Additionally, Frost was worried that the great bridge might still be blown up. In the opinion of the engineers, the heat from fires had destroyed any fuses laid from the bridge to the town, and all visible cables had already been cut by sappers. Still, no one knew exactly where other cables might be hidden. And, as Frost recalls, "The fires

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prevented even one man from being able to get on the bridge to remove any charges still there."

But the northern end of the Arnhem bridge was in Frost's hands, and he and his courageous men had no intention of giving it up.

At battalion headquarters, hastily established in a house overlooking the bridge, Frost settled down for the first time during the day. Sipping from a large mug of tea, he thought that, all in all, the situation was not too bad. "We had come 13 kilometres through difficult country to capture our objective within seven hours of landing in Holland — a very fine feat of arms indeed."

Although restless, Frost, like his men, was optimistic. He now had a

force numbering about 500 men. He would only have to hold, at most, for another 48 hours — until the tanks of General Horrocks's 30 Corps arrived.

German Frustration

FROM Berlin to the western front, the German high command was stunned by the sudden Allied attack. Only in Arnhem, where the British 1st Airborne Division had dropped almost on top of General Bittrich's two panzer divisions, was the reaction both fierce and quick. Elsewhere, baffled and confused commanders tried to determine whether the startling events of September 17 were indeed the opening phase of an invasion of the Reich.

At Field-Marshal von Rundstedt's

DO PARENTS SEE THEIR CHILDREN GROW?

Often one hears a visitor, who hasn't seen a child for a long time, exclaim to the parents: "My, how big he has grown!"

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Improvements over a period of time are often missed by people, who are closely involved, unless someone draws their attention to these. Take for example what LIC has been trying to do in the matter of expediting the settlement of claims of life insurance policies.

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Percentage of outstanding claims

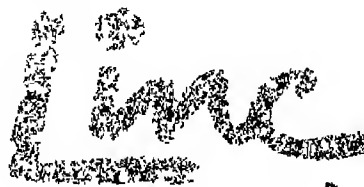
Before nationalisation

In 1972-73

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LIC's field officers are under constant pressure to go in search of policy-holders who have not put in their claims. A Claim Payments Service has already been formed and pressed into action—perhaps the only one of its kind in India. Procedures are being reviewed frequently to ensure that delays are reduced to the minimum.

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headquarters in Koblenz, the general reaction was one of astonishment. The crusty, aristocratic von Rundstedt was not so much surprised at the nature of the attack, as by the man who, he reasoned, must be directing it—Montgomery. Von Rundstedt had long been certain that Patton and the American 3rd Army driving towards the Saar posed the real danger. To combat that threat, he had committed his best troops to repulse Patton's racing tanks. Now Germany's most renowned soldier was caught temporarily off balance. Never had he expected Eisenhower's main offensive to be led by Montgomery, whom he had always considered "overly cautious, habit-ridden and systematic."

During the night hours it was impossible to estimate the strength of the Allied airborne forces in Holland, but von Rundstedt was convinced that further landings could be expected. Messages went out from his headquarters transferring units from their positions facing the Americans at Aachen. The moves were risky but essential. These units would have to travel north immediately, and their commitment in the line might take 48 hours at the minimum.

Von Rundstedt issued further orders to defence areas along Germany's north-west frontier, calling for all available armour and anti-aircraft units to proceed to the quiet backwater of Holland, where,

he was now convinced, imminent danger to the Third Reich lay.

It was late evening when the staff car carrying General Wilhelm Bittrich from his headquarters at Doetinchem arrived in the darkened streets of Arnhem. Bittrich was determined to see for himself what was happening. As he toured the city, fires were still burning and debris littered the streets—the effect of the morning's bombing. Dead soldiers and smouldering vehicles in many areas attested, as Bittrich was later to say, to "the turbulent fighting that had taken place." Yet he had no clear picture of what was happening. Returning to his own headquarters, Bittrich learned that the great bridge had been taken by British paratroopers. Bittrich was infuriated. His specific order to Harzer had been to hold the bridge.

THERE was a red glow in the sky over Arnhem as the speeding car bringing Major-General Heinz Harmel from Berlin neared the city. Apprehensive and tired after the long journey, Harmel arrived at the 10th SS Panzer Division headquarters in Ruurlo, only to find that his command post was now situated in Velp, approximately five kms. north-east of Arnhem. There, he found his chief of staff looking exhausted. "Thank God you're back!" the man said. Quickly he briefed Harmel on the day's events and on the orders received from

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General Bittrich. Harmel recalls: "I was dumbfounded. Everything seemed confused and uncertain. I was very tired, yet the gravity of the situation was such that I phoned my commander, Bittrich, and told him I was coming to see him."

As Harmel was shown in, Bittrich began immediately to outline the situation on his maps. "British paratroopers have landed here, west of Arnhem," he told Harmel. "We have no idea of their actual strength or intentions." Pointing to Nijmegen and Eindhoven, the corps commander said, "American airborne forces have secured positions in these two areas. Montgomery's forces have attacked north from the border. In my opinion, the objectives are the bridges. Once these are secured, Montgomery can drive directly up to the centre of Holland, and from there into the Ruhr."

Bittrich waved his hands and added, "Model disagrees. He believes further airborne forces will be dropped north of the Rhine, east and west of Arnhem, which will then march towards the Ruhr." *

Harzer's 9th SS Panzer Division, Bittrich went on to explain, had been ordered to mop up the British west and north of Arnhem. The 10th SS Panzer Division, he continued, was charged with all activities

* In fact, a detailed outline of Market-Garden plans had fallen into German hands, showing drop zones, objectives and assault routes. Because of the fighting, the plans did not reach Model for some hours, and when they did, he initially discounted them.

to the east of Arnhem and south to Nijmegen. Stabbing the map with his finger, Bittrich told Harmel, "The Nijmegen bridge must be held at all costs. The Arnhem bridge and the area south to Nijmegen is your responsibility."

As he listened, Harmel realized with growing alarm that with the Arnhem bridge in British hands, there was no way to get his armour quickly across the Lower Rhine and down to Nijmegen. His entire division would have to be taken over the Lower Rhine at a ferry landing in the village of Panterden, some 13 kilometres south-east of Arnhem.

Leaving Bittrich's headquarters, Harmel asked his commander, "Why not destroy the Nijmegen bridge before it's too late?" Bittrich's tone was ironic. "Model has flatly refused to consider the idea. We may need it to counter-attack."

Harmel stared in amazement. "With what?" he asked.

In the dark, Harmel set out for Panterden. His units were already on the move towards the ferry crossing and the roads were choked with troops and vehicles, while in Panterden itself, vehicles formed a gigantic traffic jam. In the opinion of one of his officers, Harmel's units might not be in action in the Arnhem-Nijmegen area until September 24 if the slow, cumbersome ferrying could not be speeded up.

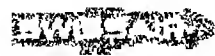
Harmel knew there was only one solution to the problem. He would have to retake the Arnhem bridge

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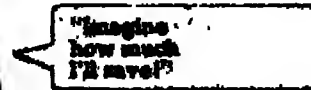
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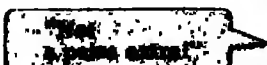


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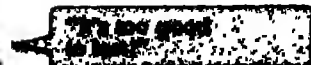


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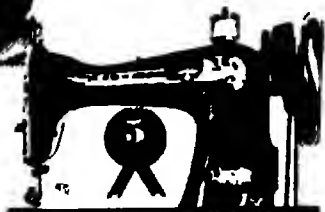


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Field-Marshal Model, General Bittrich, Major Knaust and Major-General Harmel

and open the highway route to Nijmegen. As this first day of Market-Garden ended, all the German frustrations now focused on a single obstinate man—Lieutenant-Colonel John Frost at the Arnhem bridge.

Chaos on the Bridge

THE battle for the bridge raged all night. Twice Frost's men tried to rush the southern end, only to be beaten back. Then truckloads of German infantry attempted to ram their way across. With flamethrowers, Frost's men set the vehicles on fire. Panzer Grenadiers were burned alive in the inferno and fell screaming to the Rhine 30 metres below.

Throughout the night, men of the 1st and 3rd British battalions managed, by twos and threes, to fight

through Colonel Harzer's defence ring to the north and west and reach the bridge. By dawn on the 18th, Frost estimated that he had between 600 and 700 men on the northern approach. But each hour that brought him more troops brought, too, the increasing sounds of mechanized equipment as General Harmel's armoured units entered the city and took up positions.

Even the German armour found Arnhem a hazardous and frightening place. Along various routes throughout the city, ordinary Dutch civilians had blocked the roads. Sergeant Reginald Isherwood, of the 1st Battalion, finally found his way to the centre of Arnhem at day-break, after a hazardous night on the roads. There he saw "a sight

that will live with me until the end of my days."

The Dutch, braving German and British bullets, emerged from basements, cellars, gardens and wrecked buildings, to collect bodies. "They carried the wounded to makeshift dressing stations and shelters in the basements," Isherwood recalls. "But the bodies of the dead were stacked like sandbags in long rows, heads and feet placed alternately." The grieving citizens of Arnhem were laying the bodies of friend and foe alike across the streets in two-metre-high human roadblocks to prevent German tanks reaching Frost.

Meanwhile, in the western suburbs of Arnhem, the once tidy parks and clean streets were scarred and pitted by the battle as the main body of the British 1st and 3rd battalions continued their struggle to reach the bridge. Glass, debris and the broken boughs of copper beeches littered the cobblestone streets. Rhododendron bushes and thick borders of bronze, orange and yellow marigolds lay torn and crushed, and vegetable gardens at the back of the neat Dutch houses were in ruins. The snouts of British anti-tank guns protruded from the shattered windows of shops and stores, while German half-tracks, deliberately backed into houses and concealed by their rubble, menaced the streets.

This strange, deadly battle, now devastating the outskirts of the city barely three kms. from the Arnhem bridge, seemed to have no plan or

strategy. Like all street fighting, it had become one massive, fierce, man-to-man encounter in a maze of narrow passageways.

At precisely 9.30 a.m., Corporal Don Lumb, from his rooftop position near the bridge yelled out excitedly, "Tanks! It's 30 Corps!" At battalion headquarters near by, Colonel Frost heard his own spotter call out. Like Lumb, Frost felt a moment's heady exhilaration. "I remember thinking that we would have the honour of welcoming 30 Corps into Arnhem all by ourselves," he recalls.

Sergeant Charles Storey pounded up the stairs to Corporal Lumb's look-out. Peering towards the smoke still rising from the southern approach, Storey saw the column Lumb had spotted. His reaction was immediate. Racing back downstairs, the pre-Dunkirk veteran shouted, "They're Germans! Armoured cars on the bridge!"

At top speed, the vanguard of German Captain Paul Gräbner's assault force came on across the bridge. With extraordinary skill, German drivers, swerving left and right, not only avoided the smouldering wreckage cluttering the bridge, but drove straight through a minefield that the British had laid during the night. Only one of Gräbner's five lead vehicles touched off a mine; superficially damaged, it kept on coming.

This surprise breakthrough



British "Red Devils" enter Arnhem

stunned the British. But they recovered. From parapets, rooftops, windows and slit trenches, troops opened fire with every weapon available, from machine-guns to hand grenades. Sapper Ronald Emery shot the driver and co-driver of the first half-track to cross. As the second came into view, Emery shot its driver, too. The half-track came to a dead halt just off the ramp, whereupon the remainder of its crew of six, abandoning the vehicle, were shot, one by one.

Two more half-tracks nosed across the bridge, but suddenly chaos overtook the German assault. The driver of the third half-track was wounded. Panicking, he threw his vehicle into reverse, colliding with the half-track behind. The two

vehicles, now inextricably tangled, slewed across the road, one bursting into flames.

Doggedly, the Germans coming up behind tried to force a passage. Accelerating their vehicles, frantic to gain the northern side, they rammed into one another and into the growing piles of debris tossed up by shells and mortar bursts. Out of control, some half-tracks hit the edge of the ramp with such force that they toppled over the edge and down into the streets below. Supporting German infantrymen following the half-tracks were mercilessly cut down.

Unable to advance beyond the centre of the bridge, the survivors raced back to the southern side, and in the bitter fighting,

to the most exacting
standards

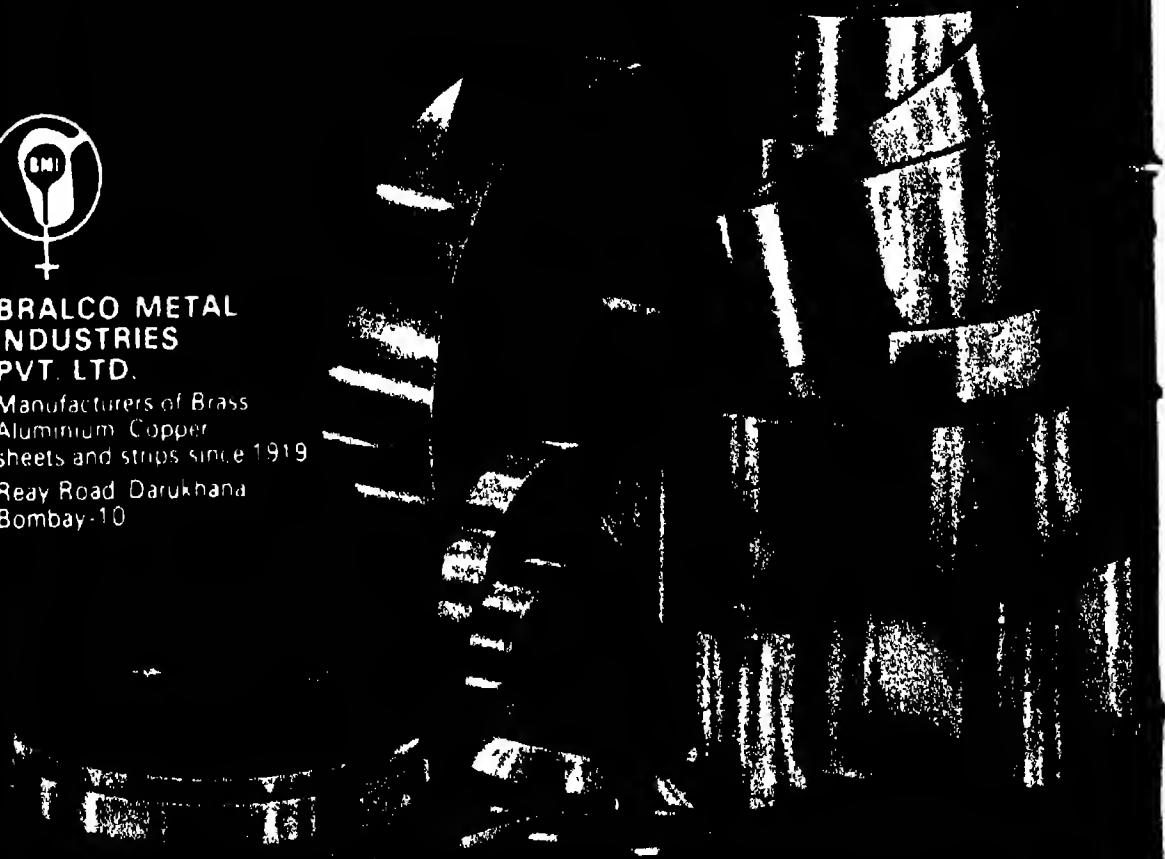
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Captain Grabner was killed.

Almost as though they were being congratulated on their success, 2nd Battalion signalmen suddenly picked up a strong clear message from 30 Corps. The grimy, weary troops imagined that their ordeal was all but over. Now, beyond any doubt, Horrocks's tanks must be a scant few kilometres away.

But it was not so. Only 45 kms. of the corridor—from the Belgian border north to Veghel—were now controlled by the Anglo-Americans. With amazing speed, the US 101st Division had covered its 24-km. stretch of road, capturing the principal towns of Eindhoven, St. Oedenrode and Veghel, and all but two of 11 crossings. But at Son the bridge was blown up by the Germans, and Horrocks's 20,000-vehicle relief column could advance no further until it was repaired.

Sea of Ruins

DELAYED by bad weather over England, the second day's drop did not arrive until about 2 p.m. The armada was gigantic, dwarfing even the spectacle of the day before. And even with the battle under way, 90 per cent of the lift landed in the right places. But once on the ground, they were soon caught up in the stalemated battle outside Arnhem. Moreover, of the 87 tons of ammunition, food and supplies destined for the men of Arnhem, only 12 tons reached the troops. The remainder fell among the Germans.

Mauled and battered, the 2nd Battalion and the valiant stragglers who had reached it were still holding, but Frost's situation had been desperate for hours and was deteriorating rapidly. "We were getting constant messages from the bridge asking for relief and ammunition," Brigadier Philip Hicks recalled. "Enemy pressure and the steadily increasing strength of German armour were building up everywhere. We could not raise Browning at Corps headquarters to explain the gravity of the situation, and we were desperate for help."

Bittrich's men held the north of Arnhem; his troops had bottled up Frost at the bridge and successfully prevented Dobie's and Fitch's battalions from relieving them. In the built-up areas around St. Elisabeth's Hospital barely a km. or so from the bridge, the battalions were now stopped in their tracks. The newly arrived South Staffordshires and the 11th Battalion were faring no better.

"We came to the wide open, exposed riverside stretch of road in front of St. Elisabeth's Hospital, and then everything suddenly let loose," remembers Private Robert Edwards of D Company of the South Staffordshires. "We must have looked like targets in a shooting gallery. All Jerry had to do was line up his guns on this one gap—about 400 metres wide—and fire. He couldn't miss."

Edwards threw some smoke bombs to try to hide their advance

and "then put my head down and ran like a hare." He stumbled over "heaps of dead, slithered in pools of blood, until I reached the partial shelter afforded by houses and buildings on the far side of the road." As for D Company, when a count was made, "only 20 per cent remained, and quite obviously we couldn't continue against such overwhelming German strength. Hopefully, we waited for the dawn."


It was as if a solid wall had been built between the division and Frost's pitiful few at the bridge.

In Arnheim itself, the stench of battle permeated the inner city. On the bridge, wreckage jutted above the concrete shoulders and littered

streets along the Lower Rhine. Along the waterfront hundreds of fires burned unattended. Sergeant Robert Jones remembers it as "a Sargasso Sea of blazing collapsed buildings, half-tracks, trucks and jeeps."

Cellars and basements were filled with wounded. There was almost no morphine left, and even field dressings were almost gone. The men had set out for the bridge with only enough rations for 48 hours. Now, these were almost exhausted, and the Germans had cut off the water. Forced to scrounge, the troops were existing on apples and a few pears stored in the cellars of the houses they occupied. Private G. Jukes had a vision of "being

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eventually relieved, standing back-to-back defiantly in bloodstained bandages, surrounded by dead Germans, spent cartridge cases and apple cores."

Hour after hour Frost waited vainly for Dobie's or Fitch's relieving battalions to break through the German ring and reach the bridge. Although sounds of battle came from the direction of western Arnhem, there was no sign of large-scale troop movements. In addition, stragglers from the 3rd Battalion who managed to get through to Frost brought news that Horrocks's tanks were still far down the corridor. Some had even heard from Dutch underground sources that the column had not reached Nijmegen.

Around midnight Frost left his headquarters and made his way round the perimeter, checking his men. Although the battle had continued almost without let-up since the armoured attack during the morning, morale was still high.

Frost was proud of his tired, dirty men. All day long they had doggedly repelled attack after attack. Not a single German or vehicle had reached the north end of the bridge. But the battle had become an endurance contest, one that Frost knew his men could not win without help.

Crucial Absence

THE lack of communications had now caused a crisis of catastrophic proportions. Since the first moments

of the battle, General Urquhart had been totally out of touch with his troops. Indeed, because of an incredible series of events, he was thought to be either dead or captured, and Brigadier Hicks had finally taken over command of the division. "The situation was more than just confusing," Hicks remembers. "It was a bloody mess."

On the afternoon of the first day, September 17, just as Frost, Dobie and Fitch were setting out for the Arnhem bridge, Colonel Charles Mackenzie, Urquhart's chief of staff, watched the general pace up and down, "anxious for news." Normally, he would have directed the battle from Division headquarters; but now, turning to Mackenzie, he said, "I think I'll go and have a look myself, Charles." Taking only his driver and a signaller in his jeep, Urquhart set out after his men. The time was 4.30 p.m.

His jeep sped down the Utrecht-Arnhem road, and before long he caught up with the rear elements of the 3rd Battalion, only to be told that Lathbury had gone forward. He followed. At a crossroads on the Utrecht-Arnhem road, Urquhart found the brigadier. The area was under devastating mortar fire.

Taking cover in a slit trench, Urquhart and Lathbury discussed the situation. The critical lack of communications was paralysing their efforts to command. Urquhart decided to try to contact Division headquarters on his jeep's radio. As

he neared the vehicle, he saw it had been struck by a mortar and his signalman badly hurt. Although the radio set seemed undamaged, Urquhart could not raise Division.

"I cursed the appalling communications," Urquhart later wrote. "Lathbury dissuaded me from attempting to go back to my own headquarters. The enemy was thick between us and the landing zones. I decided he was right, and I stayed. But at this point I realized I was losing control of the situation."

In a large house set well back from the road, Urquhart and Lathbury prepared to spend the night. Urquhart was restless and unable to relax. "I kept checking to see if any contact had been made with Frost, but there was nothing."

Roused at 3 a.m., he continued to follow the 3rd Battalion's slow progress. Then, as first Dobie's troops and then Fitch's were bottled up and scattered in the western suburbs of Arnhem, Urquhart and Lathbury were forced to run for safety, finally taking cover in a three-storey house in a block of buildings near the main Utrecht-Arnhem road.

Urquhart's predicament was growing worse by the minute. Caught up in the fighting, he believed his only means of escape was to take to the streets and, in the confusion, try to get through the German positions to his headquarters. Lathbury and two other officers, fearful for his safety, disagreed with

him, but Urquhart was adamant.

During the hasty conference amid the noise of the battle, Urquhart and his officers were dumbfounded to see a British Bren-gun carrier clatter down the street, as though unaware of the German fire, and pull up outside the building. A Canadian lieutenant, Leo Heaps, who in Urquhart's words "seemed to have a charmed existence," leaped out and raced for the building. For the first time in hours, Urquhart learned what was happening.

"The news was far from encouraging," Urquhart later recalled. "Communications were still out. Frost was on the northern end of the bridge under heavy attack, but holding, and I was reported missing or captured." Urquhart told Lathbury that it was now imperative "before we're completely bottled up to take a chance and break out."

The men decided to leave from the rear of the building, where, under covering fire and smoke bombs, they might be able to get away. The route was nightmarish. While paratroopers laid down a heavy smoke screen, Urquhart's group dashed out of the back door and sprinted through a vegetable garden. Climbing fence after fence, and once a three-metre brick wall, the men moved down the entire block of houses until, finally, they reached an intersecting cobbled street. Then, confused and weary, they made a drastic miscalculation. Instead of veering left, which might have

given them a margin of safety, they turned right towards St. Elisabeth's Hospital, directly into the German fire, and Lathbury was hit.

Quickly the others dragged him into a house. Urquhart saw that a bullet had entered the brigadier's lower back, and he appeared to be temporarily paralysed. He could travel no further. Lathbury urged the general to leave without him. "You'll only get cut off if you stay, sir," he said. As they talked, Urquhart saw a German soldier appear at the window. He raised his automatic and fired at point-blank range. The bloodied mass of the German's face disappeared.

Entrusting Lathbury to the care of a Dutch couple, the three remaining men, in Urquhart's words, "left by the back door and into yet another maze of tiny, fenced gardens." But they did not get far. Reaching the garden of a house at Zwarteweg 14, owned by Antoon Derksen, they again took refuge, in the kitchen.

By gestures, Antoon tried to warn the British officers that the area was surrounded, and hastily ushered his visitors up a narrow staircase to a bedroom. Cautiously looking out of the window, they saw the reason for Derksen's wild pantomime. Below them, in positions all along the street, were German troops. "We were so close to them," Urquhart remembers, "we could hear them talking." He pondered the twin risks of continuing through the back gardens or making a dash down the

front street, using hand grenades to clear the way. He was ready to take any chance to return to his command. His officers, fearful for him, were not. It was far better, they argued, to wait until British troops overran the sector than for the commanding general to risk capture or death.

The familiar creaking clack of tractor treads forced Urquhart to stay put. From the window the three officers saw a German self-propelled gun come slowly down the street. Directly outside the Derksen house, it halted. The top of the armoured vehicle was almost level with the bedroom window; and the crew, dismounting, sat talking and smoking directly below. Obviously, they were not moving on, and at any moment the officers expected them to enter the house.

Quickly they pulled down some steps leading to an attic and climbed up. Crouched down and looking about him, the 182-cm. Urquhart saw that the attic was little more than a crawling space. He felt "idiotic, ridiculous, as ineffectual in the battle as a spectator." The one man who might have brought cohesion to the British attack was isolated in an attic, trapped within the German lines.

Not until the morning of September 19 did British troops reach the house at Zwarteweg 14. "We heard the wheeze of the self-propelled gun outside and the rattle of its track," Urquhart later wrote. "It was

moving off." Antoon Derksen reappeared and "announced excitedly that the British were at the end of the road. We ran down the street, and I thanked God we had made contact again."

Urquhart commandeered a jeep and, driving at full speed through a constant hail of sniper fire, at last reached Division. It was 7.25 a.m. He had been absent and lacking control of the battle in its most crucial period for almost 39 hours. Quickly Colonel Mackenzie gave him the situation — as Division knew it.

The picture was appalling. Bitterly, Urquhart saw that his proud division was being scattered and cut to ribbons. He thought of all the setbacks that had dogged his Market forces: the distance from the drop zones to the bridge; the near-total breakdown of communications; the weather delay of the second drop

plus the loss of precious resupply cargo; and the slow progress of Horrocks's tanks. Above all, Urquhart rued the incredible over-optimism of the initial planning stages that had failed to give due importance to the presence of Bittrich's Panzer Corps.

All these factors, one compounding another, had brought the division close to catastrophe. Only superb discipline and unbelievable courage were holding the battered Red Devils together. And now, Urquhart knew, he must demand more of his weary and wounded men than any airborne commander ever had demanded. He had no choice. With the steady inflow of German reinforcements, the dedicated, soft-spoken Scotsman saw that unless he acted immediately "my division would be utterly destroyed." Even now, it might be too late to save his beloved command from annihilation.

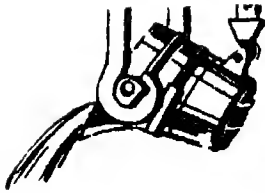
Next Month

A Bridge Too Far: Hell's Highway

By nightfall on September 19, 1944, British troops holding Arnhem bridge had been fighting for more than 50 hours. Their ammunition was all but gone. Yet despite merciless German attacks, the Allied forces stayed in the city for a further seven days. Houses crowded with soldiers were blasted into dust and rubble; incredibly, paratroops paddling flimsy boats with their rifle butts crossed a river through an inferno of machine-gun and mortar fire: even a Nazi commander congratulated his British prisoners on their immense courage. Then came the final radio message from the bridge: "Out of ammunition. God Save the King."

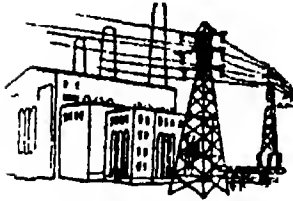
The concluding instalment of *A Bridge Too Far*, Cornelius Ryan's masterly best-selling portrayal of Operation Market-Garden, appears in

Reader's Digest for April



EASTERN INDIA—A New Bright Phase

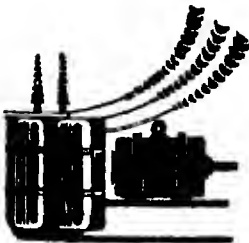
As an epitome of Eastern India comprising of West Bengal, Bihar, Orissa and Assam, Calcutta has dominated the region's economic prosperity. It was with the return to political stability in early 1972—and the consequent industrial peace (with strikes and lock-outs having declined from 806 in 1970 to 340 in 1971)—that Calcutta and the region were set on the road to economic revival. Such a trend not only continued in 1973 but reached record levels in 1974, especially in export-oriented industries, helped as they were by prevailing high prices in world markets. This has led the Union Commerce Minister, Mr. D. P. Chat-topadhaya, hopefully to say that it is feasible to double India's exports over the next five years.



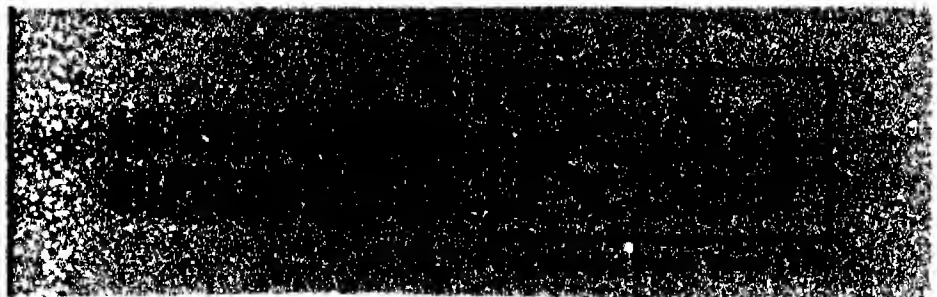
Being the Ruhr of India, West Bengal is bound to have a sizeable share of such prosperity. The State represents one-third of the country's steel capacity and produces one-fourth of India's tea. In jute, India's entire textile industry is located in the periphery of Calcutta, while the State's production of jute is more than half of India's; and of mesta one fourth of the total crop. In minerals, West Bengal accounts for nearly one-fifth of the country's total mineral output—the second largest after Bihar.



According to the Union Commerce Minister, engineering exports can reach Rs. 1,000 crores in five years against the target of Rs. 460 crores. Calcutta, a pioneer in engineering industries, today accounts for one-half of India's manufacturing capacity; to put this in some detail: the State represents 88 per cent in sewing machines, 48 per cent in railway wagons, 47 per cent in electric fans and about 30 per cent each in pig iron and finished steel.



Judged by the current hopeful trends, the next few years for Calcutta and the region that lies in its hinterland are bright. However it largely depends on the industry, and more than that on the Government, as to how the available opportunities are grasped and not lost, and utilised rather pragmatically, free from labour unrest, power-cuts, crippling credit squeeze or red tape in meeting quickly and satisfactorily India's export orders.



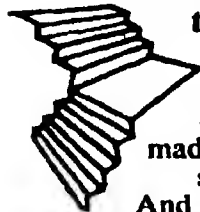
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CALCUTTA—In the 1980s

By K. C. Sivaramakrishnan

With her population rising from 8.3 million in 1971 to at least 12 million by 1986, it is natural to ask: What lies in Calcutta's future?

An answer may be found in the work undertaken by the Calcutta Metropolitan Development Authority, which, as a fact of life and a focal point in the affairs of the metropolis, has stirred up several possibilities.

As of 1971, the hinterland of Calcutta—i.e. the region comprising the states of Orissa, Bihar, West Bengal, Assam and the remaining eastern states/territories—had a total population of about 150 million, out of which at least 17 million were in cities. Calcutta accounted for 8.3 million.

By 1986 Calcutta will have at least 12 million people. This is on the assumption of mainly natural increase with nett immigration sustained at 1 per cent or less annually. The significance of the other urban centres in Eastern India vis-a-vis Calcutta is not so much as satellites or subsidiary urban complexes but as counter magnets to future migration.

Within the metropolis the coming decades will witness increasing urbanisation in the municipal and non-municipal fringes. Planners envisage, more as targets perhaps, that by 1986 the anticipated population of 12 million would be located mainly in the metropolitan centre—i.e. Calcutta city and adjoining Baranagar, Kamarhati, Dum Dum, Jadavpur, Behala and Garden Reach areas—and the Kalyani-Bansberia centre including Bandel, Kanchrapara and Haringhata.

Whether industrial and other investments in Kalyani and Bansberia would be sufficiently high to support a million people by the turn of the century is doubtful. Chances are the fringes of the metropolitan core, and other semi-urban areas,

especially on the east bank of the Hooghly will get increasingly urbanised. Most of the Metropolis is still marsh and mangrove. In the next two decades these spaces will be seized and built upon, with or without planning.

Tomorrow's CMDA will have a better circulation system, at least arterially. The second Hooghly river crossing at Princep Ghat and the bridge at Kalyani might be in position by 1980. On the west bank the two bridges would be connected by the existing National Highway 2 by-pass and the Kona Expressway. On the east bank a new expressway will link the Kalyani bridge with Barrackpore and then to Dum Dum airport.

The Eastern Metropolitan by-pass running along the eastern fringe of the city will connect Garia in the southern tip with the highway to the airport in the north. On the east-west axis, the existing Vivekananda bridge will have a more direct link to Dum Dum through the proposed Belgharia expressway. When these arterial links are completed, it should be possible for anyone to circle the entire metropolis in two to three hours.

Within the Metropolis, getting around might ease a little. A number of major roads like the Upper and Lower Circular, Tollygunge-Jadavpur, and other roads will have been widened. A flyover will link Brabourne Road with the Howrah bridge. The Tolly's nullah and the railway lines inside the City will cease to be barriers to movements.

But the volume of transit trips within the metropolitan core will also have vastly increased from 4.6 million now to 8 million by the turn of the century. Even if the proposed underground railway system takes care of about 3.5 million through first and second lines, the balance will need surface transport.

Can a legend grow in a city?



Dear Reader,

Let me ask a question.

Can a legend grow in a city?

It can and it has. In Calcutta. In the year 1974. It is still growing, like the city itself.

Four years ago, in 1970, Calcutta was given up as lost. If not from the volcanic ashes like Pompeii, it was from the sheer pressure of population and its volatile anger. Urban violence had raised its ugly head. The city was doomed.

We do not claim that CMDA are the magic letters which made the legend. The city itself is the legend. It has survived many onslaughts on its vitals. CMDA is only assisting in the recovery.

What is CMDA doing?

★ For the first time in this century, new water works and machinery, new tubewells and pipe networks are being installed to augment water supply in the 1372.7 Sq.Km. metropolitan area.

Not only the city of Calcutta but scores of municipal and non-municipal areas are benefited.

★ For the first time in this century, new sewage and drainage lines are being installed in large unsewered areas to relieve water-logging and help waste disposal.

★ For the first time again in this century, some attention has been given to the urban poor: 1500 slums have been improved. The benefits of filtered water supply, electricity, paved roads and sanitary latrines have reached nearly a million bustee dwellers for the first time.

★ Over 500 primary schools have been set up or renovated, nearly 2000 hospital beds have been added, nearly 100 parks and playgrounds have been improved.

★ Two road bridges have been completed and two more are under construction besides two flyovers. At least a dozen arterial streets have been widened and new metropolitan level highways taken up.

★ The city bus and tramcar systems have received assistance for augmentation of transport fleet and renovations.

Money can manufacture a brick: it can save a building. It alone cannot save a city. Only spirit can stem inertia and frustration.

If you want to see the legend grow, visit Diamond Harbour Road.

It does not lead either to diamond or to harbour. A narrow 13.7 mt. strip with two tram lines, two lanes for vehicles hemmed in by regular mar-



Laying of sewer

Supplement

kets and pavement hawkers and no footpath. Diamond Harbour Road has been a nightmare for thirty years or more, people have been talking about the need for a broader road. Nothing had happened.

More than desperation, people's awareness ultimately saved the day. Cutting across political and social lines and more so, breaking the self-imposed limitation of selfish interests, people in the locality decided to help themselves by helping CMDA which in its turn, was only too glad to help them. On a fine June morning, there was a tremendous burst of activity as people began to demolish their own shops with their own hands. Not a policeman was in sight and CMDA bulldozers awaited on the outskirts watching people's muscles doing what its horsepower would have to do otherwise. Within ten days, the Diamond Harbour Road looked like a bombed sector with devastation all around. Within a month, a 27.4 mt. road began to take shape. Within six months people have agreed to expand it to 36.6 mt. This is in glaring contrast to what many generally think about the Calcuttan and his so called violent temper.

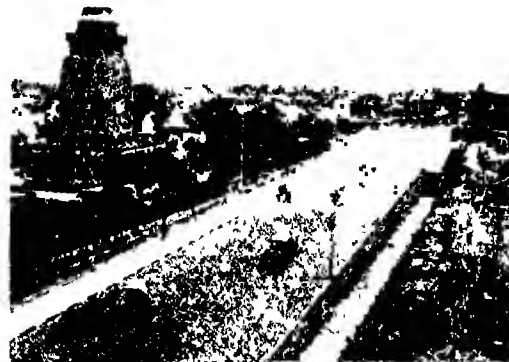


An improved bustee

On the southern side, the Ballygunge-Kasba overbridge project similarly involved the displacement of several shopkeepers in that area. The promise of alternative shopping and residential accommodation by CMDA has cleared the path for the construction work which has made considerable headway.



Garden Reach Water Works under construction



Chella Bridge completed in January, 1974

If I have selected only two projects, this does not mean that we have exhausted our list. We have taken over 100 major projects all over the metropolitan area and work is going on in over 4000 work sites. An urban development programme of such magnitude has never been visualised in the history not only of this country but elsewhere too.

Each project has meant difficulties for us. In most sites, work has to be done in congested, built-up areas. In many, people have been inconvenienced. However, they have realised that if they love Calcutta, the city itself will reciprocate that love in some way.

This massive programme in essence demonstrates that the city cares: the citizens care.

If you want to know more, please write to us.

B. N. Sen

(B. N. Sen)

Chairman, CMDA

CMDA CALCUTTA METROPOLITAN
DEVELOPMENT AUTHORITY

International

**Synonym
of your
confidence**

**for
product
quality**

**backed up
by the right set of
men and
machinery**

Combustion:



A company is known by the company it keeps. In International Combustion's case, it boils down to their men and the products they produce with the machinery at their disposal.

Consider IC's Raymond, Vacseal and Syntron range of products. And their involvement in power engineering projects, ecological engineering and various turn-key projects. All have earned for them quite a reputation, apparent from the many 'repeat' and consistent orders. The reason behind all this is the superb engineering skill of IC men...They manufacture every product with infinite care ensuring top-flight product performance. What's more, they're continuously engaged on 'Research and Development'.

International Combustion today are a wholly Indian-managed organisation with activities in many vital fields of engineering with aid of the latest technological assistance and expertise of the entire IC group of companies that are operating today in all the six continents of the world.



International Combustion

REGISTERED HEAD OFFICE : 101, Park Street, Calcutta-16

BRANCH OFFICES : 2E/28, Jhandewalan Extn., New Delhi-55

4A, Smith Road, Madras-2 • 44, Maulana Abdul Gaffar Road, Bombay-18

India Foils at work



Packing Up The Population Problem

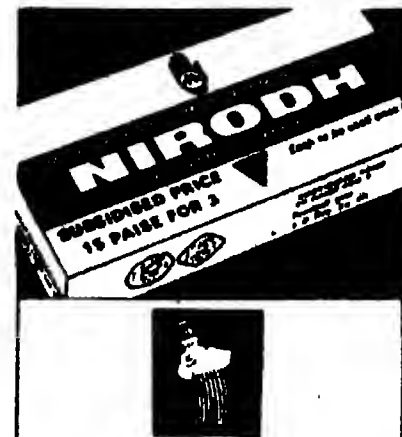
Family Planning is the effective solution to India's critical population problem. And aiding the Family Planning effort is foil—used for packing rubber contraceptives and pills.

India's population is increasing by a staggering 15 million every year! The Government of India have launched a massive Family Planning drive—and India Foils too play their part.

Already more than 235 million contraceptives have been packed in foil supplied by India Foils—producers of the perfect, protective package.

India Foils-the Innovators

IFOC-114 R2



India Foils Limited

(Incorporated in Great Britain.
Liability of Members Limited)
4 Mangoe Lane, Calcutta 1
Calcutta Bombay New Delhi
Bangalore Cochin

There might be some marginal easing, but the spectacle of 'travel by overhang' from a bus or a tram window will continue to haunt Calcutta. If tube railways or its alternatives are delayed, the situation will worsen.

Basic Services:

In the coming decades some improvement in the basic urban services like water and sanitation will be noticeable. Assuming the Farakka Barrage delivers even part of the promised 40,000 cusecs of Ganga waters into the Hooghly, the reaches of the river above Uluberia might be free from salinity. The giant water works at Garden Reach and Howrah already under construction and the proposed ones at Serampore and Baranagar will be completed in stages between 1976 and 1986.

A per-capita water supply of 180 litres per day is likely to be ensured in most parts of the metropolis so that the present average of 45 to 50. Further, drainage within the city will definitely improve and the recurrence of flooding in a monsoon period lessen.

Removal of human wastes will be better organised. At least the 200,000 odd service privies would be removed. All of Calcutta, including Jadavpur, Tollygunge, parts of Beliata and Garden Reach, most of Howrah and parts of Serampore, Chandra Nagar, Midnapore, and Durgam Chatterjee, will be brought under a sewerage system. If the City Corporation could actually be reorganised,

over half a million units, there is, perhaps, little hope for relieving the present congestion of 7.2 persons per *pucca* housing unit. Chances of new slum growth are high and much of this may happen on the marshy land around the metro core.

A New City in the Salt Lake:

The Calcutta of tomorrow may find some relief in the Salt Lake City, which now covers over 13 kilometres of reclaimed buildable land. Planners have been urging rethinking and redrawing of the plan to increase residential densities, build a strong City centre, shift some of the Government offices from the existing City core to Salt Lake, provide space for 'clean' industries and include facilities for higher education, culture and recreation. Support for this idea is increasing and it is fair to assume that the Salt Lake City of tomorrow might emerge as a brighter part of the metropolis.

There is a growing realisation now that a metropolitan area has to take, perforce, a metropolitan view of its problems and future. Regrouping some of the 200 municipal and non-municipal fragments of the CMDA is being urged increasingly. Metro politics is universal and not confined to Calcutta. Here again, as in other aspects of metropolitan life, opportunities for a rational, viable framework which could meet the criteria of efficiency and participation of local self-government, exist.

By events, more than by design, Calcutta has not priced out its poor or pushed them to the fringe. By events again, Calcutta has grown to a size and shape where the *poor* and the *rich* are indistinguishable. With its massive all-embracing form, the city will change, physically, socially and functionally in parts. But the metropolis as a whole will remain, a vast, multi-million of souls and a vast, multi-million of people. The results of the new plan will be neither uniform nor necessarily pleasing but hopefully better than the present.

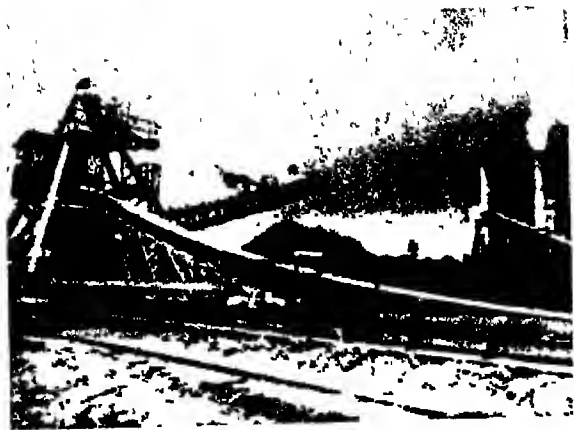
1936: THE DUNLOP STORY



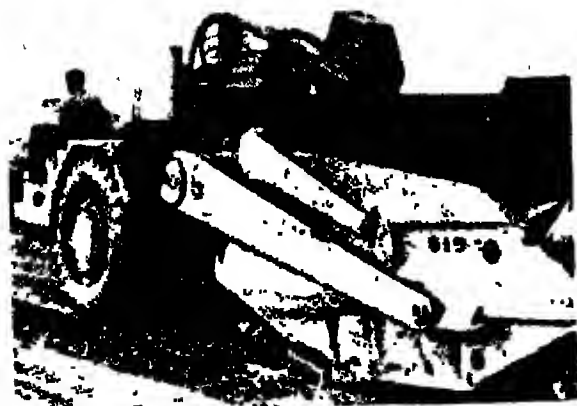
1936:

DUNLOP INDIA
—keeping pace with the country's development

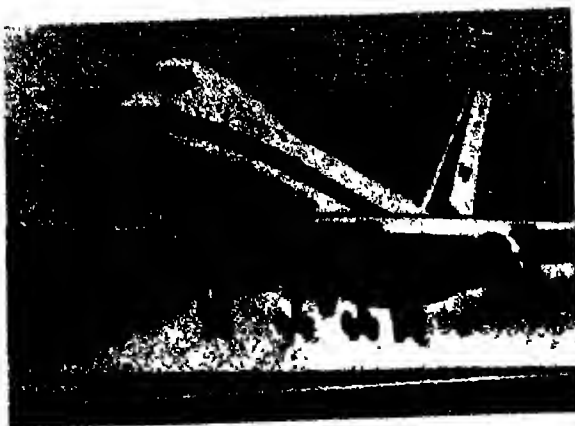
DPRC-73



1953:



1965:



1972: First test lift completed.



1973:

**One fork lift truck looks
pretty much like another.**



So why should you pay more for a Godrej C 500?

At first glance, all diesel fork lift trucks look alike. So it's not surprising that some companies opt for the cheapest, without trying to find out why they cost less.

And the simple truth is that when a fork lift truck costs less to buy, it eventually ends up costing a lot more to run and maintain.

UNIQUE GODREJ TRANSMISSION MULTIPLIES POWER:

The typical fork lift operation is a start-stop-lift-lower process. Unfortunately, most fork lift trucks use conventional automobile transmissions, which run into problems in such situations.

On the other hand, each Godrej C 500 fork lift truck has constant-mesh gears and a fully automatic hydraulic transmission called Hydratork, at the core of which is a remarkable torque convertor which multiplies engine output 2.2 times.

AND LEADS TO OPTIMUM PERFORMANCE:

You get faster acceleration because of Hydratork. A 4.4: 1 pre-reduction gear on the drive axle gives you the greatest tractive power right at the wheels—where it really counts. It also boosts braking power, so you can stop faster and with less effort. You can even inch these trucks forward—slowly and with perfect control—and at the same time lift heavy loads at high speeds. It all adds up to making your materials handling speedier and more efficient.

CONSTRUCTION IS TOUGHER:

While the C 500 trucks themselves are rated for 2.25 and 3 tonnes, the transmission drive line components are rated for 6 tonnes. This gives them enough strength and durability

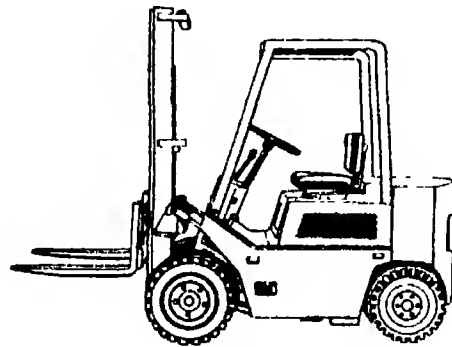
to handle shock and impact overloads under which other trucks collapse altogether.

AND HANDLING IS EASIER, SAFER:

With the C-500, heavier the load, slower the descent speed. Positive-action control levers are all mounted right on the cowl, where they're easiest to reach. So your truck operator goes through his day with less strain, greater comfort. And you get higher productivity per man-hour.

BETTER OUTPUT-COST RATIO:

When you add up all the costs, you'll find a Godrej C 500 works out a lot cheaper in the long run. Even if it does cost a little more initially.



Godrej

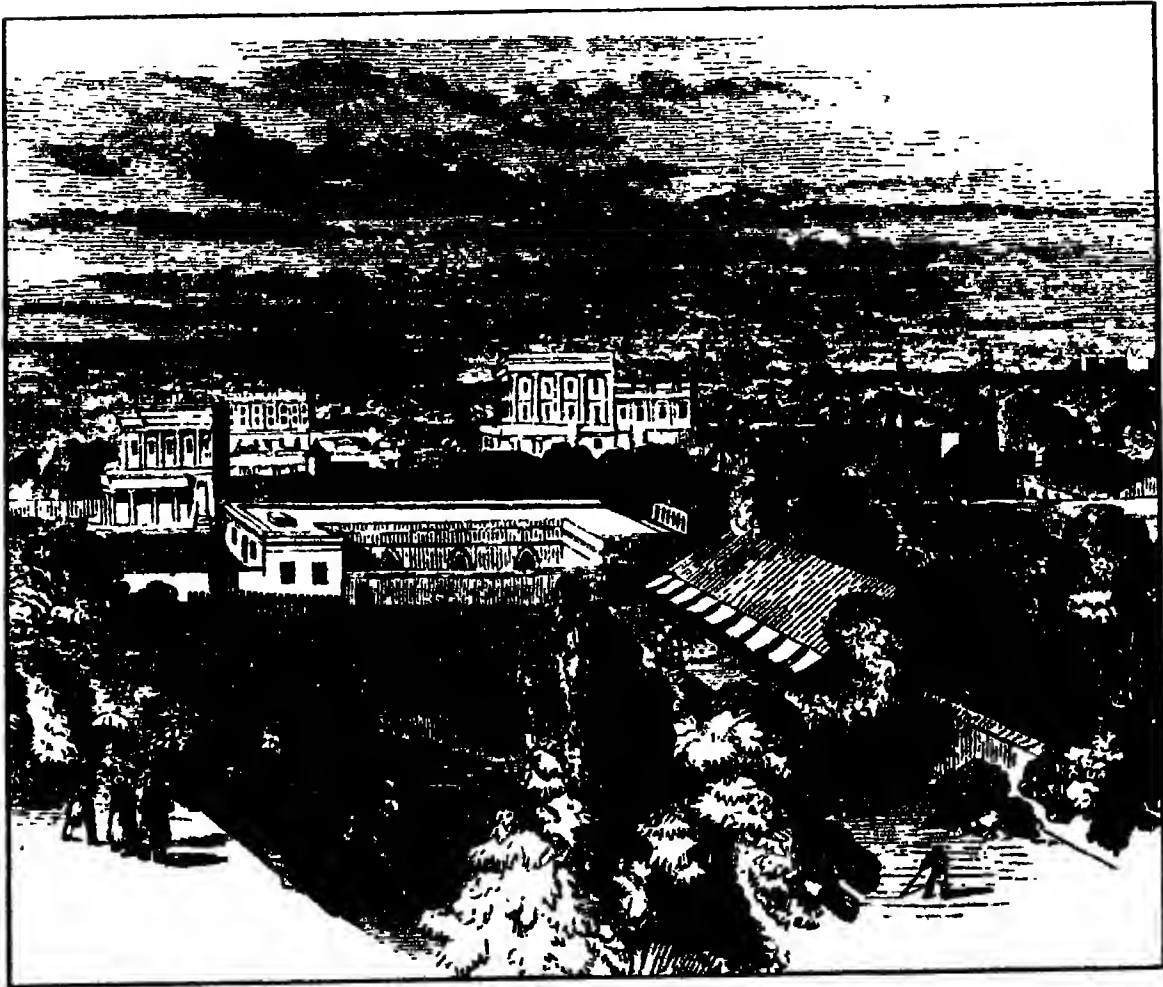
**C 500
DIESEL
FORK LIFT
TRUCKS**

Manufactured by
**GODREJ & BOYCE MFG. CO.
PVT. LTD.**

Godrej Bhavan, 4A Home Street,
Fort, Bombay 400 001.

In technical collaboration with
Clark Equipment Company, U S A.—
world leaders in materials
handling equipment.

Can you identify the scene?



Our earliest memories go back to
Calcutta in the year 1867. We have
witnessed much change around us since
those pioneering days. This great metropolis is
now the nerve centre of industrial
activity in the region.

We too have changed. Growth and
development in our organisation have
kept pace with the march of time.

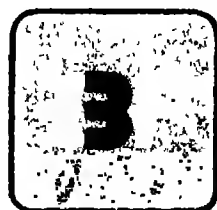
Today we are active in so many more
areas. All of them vital to the national
economy : marketing petroleum products ;
project engineering in the core sector
as pioneers ; manufacturing special grade
greases ; fabricating metal containers for
lubricants and fuels ; producing
motors, switchgears and varied electrical
equipment ; supplying essential inputs
for agro-based and engineering industries ;
all of this contributing to the prosperity of
the eastern region.

Our obligation to our interests in the
region has prompted a substantial
investment in technical know-how,
plant and equipment, research and
development facilities and human skills.

Our judgement has been well rewarded.
Today our turnover from our eastern
India units alone exceeds Rs. 40 crores.

How will we act in the future, when
the patterns of life have shifted even
more radically? We will ask ourselves
the same old question, "Can you identify
the scene ?" For it is only in recognising
one's surroundings that one becomes
conscious of the needs to be met.

And upon such realisation is based a
meaningful role.



THE INDO-BURMA PETROLEUM COMPANY LTD.

**The Indo-Burma Petroleum Company Ltd.
Balmer Lawrie & Co. Ltd. ★ Bridge & Roof Co.
(India) Ltd. ★ Industrial Containers Ltd.
Biecco Lawrie Ltd. ★ Steel Containers Ltd.**

'Magnificent Obsession'

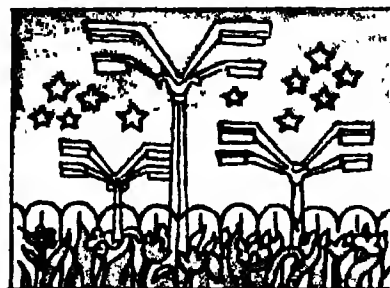


is another name for **mazdamania**

If you light up a Mazda Lamp,
it could well turn into a magnificent
obsession!

Because only Mazda makes sure of
three exclusive advantages! ★Exact
wattage ★Correct unit consumption and
★Much longer lamp life.

And Mazdamania could get you
anywhere: at Home, in the Office, or even
out on the Street. So if you're a
Mazdamaniac, remember you're not the
only one.



**make sure
it's
mazda**

Space donated by a Mazdamaniac

TEA—Promising Prospects

By Prafull Goradia

For tea, 1974 has been the best year of the decade. Among the leading world producers, India alone had a record crop—351 million kg. by September 1974, which was 10.1 million kg. more than production during the corresponding period in 1973.

West Bengal and Assam accounted for this increase, as there was a shortfall of 3 million kg. in the South Indian production.

Another factor favouring India was that after years of virtual stagnation, prices moved up by 30 per cent over 1973. Stagnation had, indeed, been a marked feature of our exports since 1966-67, and exports had declined to Rs. 147 crores in 1972-73 from Rs. 156 crores in 1971-72. Exports in 1974 are likely to earn Rs. 220 crores in foreign exchange.

Tea production in 1974 is likely to reach the target of 478 million kg. as compared with 467 million kg. in 1973 and 453 million kg. in 1972.

The prospects of the tea industry in Eastern India are sound. The tea gardens of Assam, West Bengal and Tripura, which produce three-quarters of India's tea, can look forward to a period of growth and prosperity.

India exports half its tea: countries buying more Indian tea include U.S.A. and the Soviet Union. One may, therefore, at this point ask, why then did tea prices only appreciate by 50 per cent over the two decades between 1953 and 1973? Largely, this was due to supply rising at a faster rate than demand.

The world's known production of tea (figures of recent trends in China are not available) rose by 85 per cent, or at an annual average of 4.25 per cent during this period. This refers to dry tea. In addition, the ability of the average kilogram

of dry tea to produce liquid or cups of tea (which is what the consumer is concerned with) also increased.

Not only did the quality of tea-making improve, but a new technique of processing was widely introduced in the 1960's. This process known as CTC (Crush, Tear and Curl) helps make tea which, on an average, produces twice the number of cups per kilogram as that manufactured by the orthodox or traditional process. By the late 1960's nearly a third of the world's tea was CTC. The result was that over the two decades, the estimated availability of liquid or cups of tea increased by 185 per cent (against a production increase of 85 per cent) or an annual average of over nine per cent. It is this exceptional rise in supply which largely explains the stagnant tea prices of the 1950's and the 1960's.

The world trend of rising production has in recent years slowed down, notably in Sri Lanka, another big grower of tea, and the African countries. From now on, therefore, a better balance between supply and demand is expected. In fact, 1974, by witnessing a 35 per cent price appreciation, has already shown the beginnings of a welcome readjustment in the equation between availability and consumption.

The tea gardens of Eastern India have a decisive advantage over those of any other area. Most of them are situated on the plains and at the same time in sub-tropical latitudes. These two factors help to produce a combination of heat and humidity ideal for tea cultivation. All the other tea-growing areas are either on hill slopes or at higher latitudes or suffer from both these handicaps. The warmer climate of the plains means faster growth and comparatively higher yields. The tea so produced also yields more

In cables...



INCAB

...stays ahead

The demand for sophisticated electrical cables grows steadily in India. INCAB is always ready to meet the challenge with new innovations.

11 KV PVC Power Cables

Many years of high-powered research by our Research and Development wing at our modern compounding and extrusion plant at Jamshedpur has led to a tremendous breakthrough in the manufacture of 11 KV PARAMITE PVC Power Cables. These cables conform in all respects to IS : 1554 Part II. And INCAB is the first recipient of Indian Standards Institution Certification marks for these cables.

11 KV HV Rubber Cables

In the manufacture of rubber cables, the Research and Development wing at INCAB has achieved yet another first. The design and quality of these 11 KV and above rated PARAMITE Rubber Cables have been perfected to keep the partial discharge level within the international acceptance standards.

Continuously Transposed Conductors

We have also pioneered the manufacture of highly sophisticated continuously transposed conductors for the giant transformer industry in the country.

Enamelled wires conforming to IS : 4800 and more

Our Polyester and Polyvinyl Acetal based enamelled wires conforming to relevant IS : 4800 are in constant demand for transformers, motors, fans and other electrical equipment. And that's not all. We manufacture them if required, to meet onerous special qualities outside the specification.

We at INCAB are pledged to move ahead with the times and to contribute significantly to the advancement of the country.

INCAB

quality cable-makers - first and best

HT-INC 8181-A

UBI'S COMMITMENT AND SERVICE TO ECONOMY

Resurgence of national aspirations in the early decades of the century gave an impetus to Indian entrepreneurship. In the eastern region, Commilla Banking Corporation, one of the four constituents of UBI, was formed in 1914, followed by Bengal Central Bank in 1918, Commilla Union Bank in 1922 and Hooghly Bank in 1932. These four banks formed UBI in 1950 by amalgamation in order to restore confidence in the banking system that was badly shaken by a series of crises.

UBI was born in eastern India. It is also the Bank's major area of operation. After nationalisation in July 1969, UBI has been assigned the role of a Lead Bank in eight districts in West Bengal, five in Assam and the States of Manipur and Tripura. In its capacity as the Lead Bank, UBI will be primarily responsible for developing the banking system in these areas.

UBI had, from the beginning, a deep involvement and commitment in the trade, commerce and industry of eastern India. Take the case of the tea industry. It is one of the mainstays of the economy in this part of the country. The Bank's association with it spreads over nearly five decades. The Bank extends its assistance at every stage, right from production to export. Similar is the Bank's involvement in the engineering industry of the region.

UBI also provides resources to other financial institutions like the Industrial Finance Corporation of India, the Industrial Credit and Investment Corporation of India, the Agricultural Finance Corporation and State Financial Corporations.

Undertakings like C.M.D.A., West Bengal State Electricity Board, Assam State Electricity Board, Assam Small Industries Development Corporation, Tripura Small Industries Development Corporation, Assam Farming Corporation etc. are recipients of UBI's assistance. UBI has sponsored Farmers' Service Societies in Manipur Tripura and West Bengal to take banking facilities to small farmers. UBI is one of the sponsors of North Eastern Industrial & Technical Consultancy Organisation (NEITCO) based at Gauhati which renders consultancy services for the promotion of industrial development.

Since nationalisation UBI has stepped up its efforts for providing credit support to road transport, small scale industry, retail trade and small business, professionals and self-employed persons, export, education and agriculture.

UBI is ever alive to the needs of assisting schemes for self-employment and expanding its base. For instance, under the Additional Employment Programme, launched by the Government of India towards the end of 1973, UBI extended a credit limit of Rs 2.58 crores involving 1894 accounts upto the end of March, 1974.

As a progressive financial institution sensitive to the needs of the people, UBI goes all the way to take banking facilities to our countrymen who were denied these before. UBI's commitment and involvement in the life of the people in its major areas of operation bear testimony to the Bank's efforts in that direction.



UBI IN THE LIFE OF WEST BENGAL, ASSAM, TRIPURA, MANIPUR, AND MEGHALAYA

COMMERCIAL BANK OFFICES AS IN JUNE, 1974

AREA	UBI	ALL BANKS	UBI'S SHARE
Rural & Semi-Urban	232	666	35 %
Urban	33	145	23 %
Metropolitan	71	405	18 %

UBI's share in rural and semi-urban areas is greater than that in urban and metropolitan areas. This indicates UBI's endeavour to take banking facilities to people who were denied these before.

ASSISTANCE TO AGRICULTURE AS IN JUNE, 1973

BANKS	NUMBER OF ACCOUNTS	AMOUNT
UBI	45,193	Rs. 6.56 Crores
All Banks	72,842	Rs. 19.99 Crores
UBI's Share	62%	37%

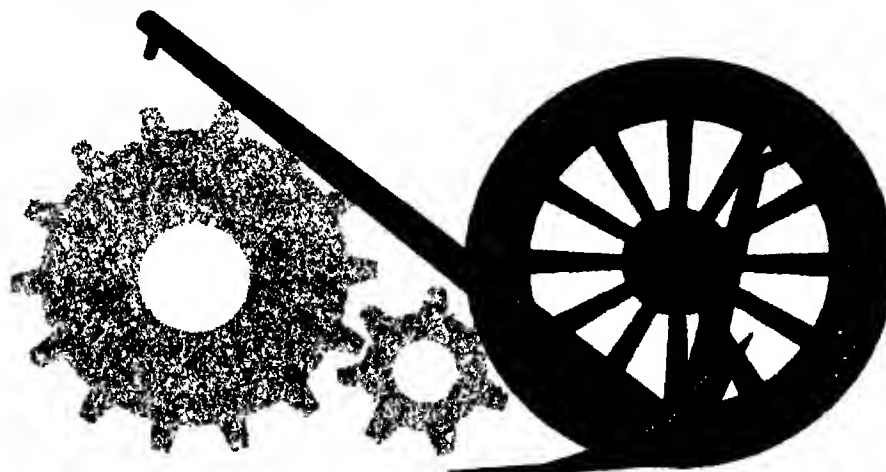
Of all the farmers assisted by UBI, nearly 85% are small farmers holding less than 5 acres of land. This explains the significantly large number of agricultural accounts of UBI.

ASSISTANCE TO SMALL SCALE INDUSTRY AS IN JUNE, 1973

BANKS	NUMBER OF ACCOUNTS	AMOUNT
UBI	4682	Rs. 15.96 Crores
All Banks	12,928	Rs. 59.63 Crores
UBI's Share	36%	27%

UBI assisted on an average nearly 4 units each day of the one-year period ending June, 1973.

ATTUNED TO PEOPLE'S ASPIRATIONS



United Bank of India

(A Government of India Undertaking)

WBSEB: Switching on a brighter tomorrow



WBSEB supplies power to North and South Bengal for agriculture, industry, railways, domestic and commercial consumptions. In addition, it caters to Calcutta's requirements.

Both in 1973 and 1974 the Board had to operate all the four units of its Bandel Plant for more than half the year, to help Calcutta in its months of crisis. Also the new Plant at Santaldih has been making available power to DVC for transmission to Calcutta. In North Bengal, Jaldhaka continues to be a major source of stable power.

EXPANSION : Both Bandel and Santaldih are 'on expansion'. The 2nd Santaldih unit will shortly be transmitting power through the new 220 KV direct line to Calcutta while another giant plant comprising three 200 MW units is in the making at Kolaghat. The hydel projects at Jaldhaka and Kurseong are also 'on expansion'.



RURAL ELECTRIFICATION
Power has now reached 10,000 villages in the State. This incidentally means about 7,000 villages have been electrified in just over thirty months.



FINANCE : The Board is doing all it can to raise resources. Recently there has been an upward revision of tariff to cover higher rates of fuel, freight and other items. Smooth flow of funds from financial institutions will ensure timely completion of projects for the targeted increase in generation of power by more than 1000 MW by the end of 5th Plan.

TCP/WBSEB312/74

**GEARED TO THE NEED
FOR MORE POWER**

WEST BENGAL STATE ELECTRICITY BOARD



...the tea industry... One can, therefore, confidently hope that, keeping in view the country's interests, the industry will not be allowed to fall a victim to either shortsightedness or a policy of ad hocism.

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Protecting the Consumer:

...the world, where tea is popular as a beverage, it is sold as a branded and packaged product. The exception is India where except for a small quantity of unblended loose tea, in other countries the branded packets sold are either blends of tea from a particular country or a blend of various countries. In India, except for the packet tea companies, loose teas sold may be either from one garden or from disparate gardens without packaging. Besides being susceptible to contamination such unbranded teas can never be a standard product.

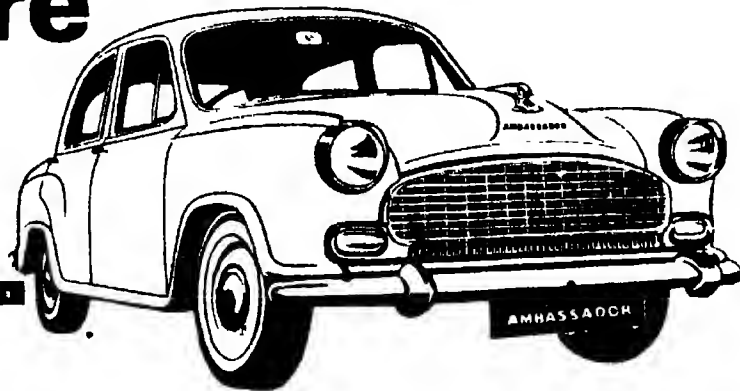
Any retailer of tea whose turnover exceeds a certain volume would find it impossible to purchase during a season sufficient quantities matching in quality week after week. He therefore has to resort to blending to obtain a standard which his customers would approve and accept. This is the art of blending through which the quality of the tea is raised.

It is the blender who select and buy his tea during the high quality period to the produce a standard with price regulating his demand in order for him to produce a standard of consistency and a standard throughout his trading season. His endeavour is to give his customer perfect satisfaction and value for his money, the essential ingredients of a marketing company.

...with experts estimating that... only marginally higher than...

...production has been erratic... 1969-70 production... the next year...

You, your Ambassador and Kilometres per litre



30 Kmph	40 Kmph	50 Kmph	
15·5	15·6	15·1	

And to get most from a litre, optimise your driving habit. Test runs in Calcutta during peak traffic hours show upto 24% saving of petrol by controlled driving practice, based on following simple rules :

- Park the car at night so as to avoid using reverse gear.
- Do not use accelerator when starting. Pull choke, if required, to minimum extent.

Do not warm up engine by revving when stationary, but drive away as soon as started. After the engine warms up, push the choke back. Do not use choke for a moment more than necessary.

Use I gear only for initial motion. Shift to II immediately. Change up from II to III at 20-25 Kmph and III to IV at 30-35 Kmph. Change down to III below 25 Kmph and to II below 15 Kmph.

Accelerate slowly and drive at a steady smooth pace using moderate speed. Your best cruising speed is 30 to 50 Kmph. Anticipate stops and minimise braking. Do not race engine while waiting. Switch off at extended stops.

Every litre of petrol costs you more today but you could still pay less to go farther. It all depends on where you put that litre. Put it in your 1975 Ambassador and get more Kilometres. Make your own comparisons size for size, in lively performance, elegance and comfort.

Look at the table below and see what you can get. We are not talking about the Ambassador's long life and sturdiness. Just performance figures that make you sit up.

KILOMETRES PER LITRE at constant road speeds			
60 Kmph	70 Kmph	80 Kmph	90 Kmph
13·9	12·5	11·4	9·8

And, above all, do not forget to service your car to recommended schedules.

**Now, more than ever,
it's time to buy an
Ambassador
—the car for 1975**



rose again to 5.7 million bales in 1971-72, then slipped again. In 1973-1974 production rose to 5.6 million bales. Jute manufactures too have mirrored this pattern, ranging between 11.29 lakh tonnes and 12.20 lakh tonnes since 1971-1972. In 1947, there were 106 jute mills in the country. Now there are 73, of which 62 are in West Bengal. The industry employs more than 250,000 people.

To invigorate the sagging industry, the Government of India set up the Jute Corporation of India in April 1970. With headquarters in Calcutta, this corporation is responsible, among other things, for raw jute price support and commercial and buffer stock operations. It also regulates external trade in raw jute and last year arranged the export of 2 lakh bales.

Recognising that low jute prices discourage farmers from maximizing production, the Corporation purchased six lakh bales at the remunerative average price of Rs. 1,576.80 per tonne. This has had a healthy effect on the general price and, during the Fifth Five Year Plan, the Corporation is expected to play a large role in establishing fair jute prices thus stimulating production.

Another factor inhibiting jute production is inadequate supply of seed and poor distribution. The Jute Agriculture Research Institute in Barrackpore produces about three quintals of nuclear seed and about 16 quintals of foundation seed every year. This is only enough for 1.9 lakh hectares. However, the Institute hopes to expand production. Efforts are also being made to increase the irrigated area under jute from 44,000 hectares to 2.3 lakh hectares during the Fifth Five Year Plan. The total area under jute cultivation during the Fourth Five Year Plan varied between six and eight lakh hectares.

On the manufacturing side, the Jute Textiles Consultative Council advises the

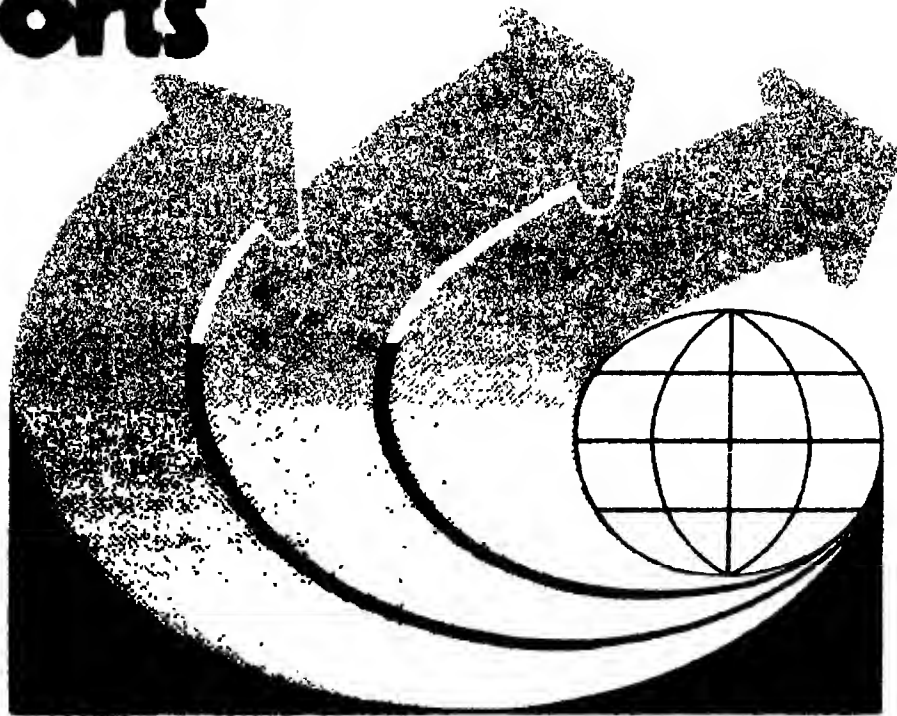
Government about the industry's problems and prospects. During 1973-74, the Government accepted in principle the imposition of a cess for the modernisation of the industry. This money will be used for research and development. A Jute International is to be set up to safeguard jute in the world market and ensure multilateral co-operation.

The year 1973 was good for the industry. There were four reasons for this: skyrocketing oil prices which forced up the prices of synthetic substitutes; adequate supply, production touched eight million bales, there was a carryover of 10 lakh bales from the previous year; co-operation with Bangladesh in production and marketing; and fiscal relief by the government, which reduced export duty on hessian cloth by half and cut the duty on carpet backing between Rs. 100 and Rs. 500 a tonne. Duty on sacking was abolished.

Last year, however, was a very difficult one. It began with a 33-day industry-wide strike with disastrous export and other consequences. Acute power shortages threw production schedules completely out of gear. And on top of all this, declining foreign demand, particularly in USA, hit the industry hard, with carpet backing hessian being the worst affected. Export of gunnies (49,000 tonnes in April 1974) sank to 36,700 tonnes by October. The situation became so grave that the government stepped in and again reduced the export duty on carpet backing hessian to a flat rate of Rs. 200 a tonne. But hardly had the industry savoured this good news before it was rocked by another strike.

So the industry clearly has its back to the wall. If it is to survive, world demand for jute as a packing medium or for carpet backing must be maintained. And uncertain deliveries (because of labour unrest on other factors), widely fluctuating prices and frequent changes in the country's export policies are hardly likely to inspire confidence in the foreign customer.

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For nearly forty years now Indian Oxygen Limited has played a pioneer's role in the production of principal gases like oxygen, dissolved acetylene, nitrogen, argon and nitrous oxide and in popularising the numerous applications of these gases in industrial and everyday life.

Economic development is not possible without STEEL. IOL is proud of its contribution to the development of this key industry in India by helping to set up or maintain oxygen plants for various steel producing units. Complex distribution systems have been perfected to provide unfailing supplies of oxygen virtually 'on tap' inside the works. It was IOL that pioneered gas welding and cutting methods, and later on, electric arc welding in the country. IOL was helped initially by the technology it could gain access to through its international collaborators. But very soon, its local talent plus the valuable experience gained, transformed what was relevant in international expertise to suit the needs of Indian industries in an Indian environment. Today IOL is self-sufficient in the manufacture of elaborate equipment, consumables and accessories that are required by light heavy and specialised metal fabrication industries.

IOL has likewise been the pioneer in supplying gases like high-purity oxygen for the mountaineer, the deep sea diver or the

crew of high-flying aircraft, or in the operation theatre. To meet the vital demands of surgery and anaesthesia, IOL offers a unique range of medical gases, and equipment like the 'Boyle' anaesthetic apparatus and intricate surgical instruments and accessories. Special products like portable anaesthetic equipment for our defence forces have also been designed.

IOL is entirely devoted to the task of designing new and modern equipment indigenously, thus saving vital foreign exchange and achieving a significant breakthrough towards complete self-reliance in sophisticated plants and equipment manufacture. Today IOL is in a position not only to supply gases and equipment, but to provide complete plants for air-separation and other process applications. Many such plants have already been delivered and commissioned.

IOL is fully committed to the goal of self-reliance. In the sphere of its own operations IOL has progressively achieved import substitution in respect not only of raw materials and components but also of design and technology. To help the country fill up gaps that still remain in its industrial structure IOL is planning to diversify into new fields. IOL's Research & Development Department which has played a major role in helping the Company to develop new products has geared itself to meet the challenges of the future.

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Many years ago IOL pioneered the manufacture of oxygen and other gases in India. The technology associated with their use has ushered in a revolution for many industries.

As world technology developed, IOL kept pace. Advanced welding techniques such as submerged arc welding, TIG and MIG welding and the necessary equipment. Sophisticated cutting machines such as the solid state control gas cutting machine. Electrodes for welding thick armour plates and stainless steel, tubular hard facing electrodes for prolonging the life of machinery. Complete pipeline systems for the distribution of gases. And then, entire gas plants and cryogenic equipment. All these and many more IOL has introduced into the country. And on the way are others. Fully automatic welding machines, more versatile cutting machines. Gases of extra high purity. Additions to the range of electrodes.

In fields as diverse as steel-making and food preservation, metal joining and fertilisers, electronics and anaesthesia, space rocketry and pollution control—IOL is working today to develop the technologies the country will need tomorrow.

IOL is technology



Indian Oxygen Limited

Hair oil is
indispensable
to keep the
hair healthy
lustrous and
beautiful

The strength of the hair largely depends on the care and nourishment of its root. There are innumerable blood vessels at every single hair root and they are responsible for feeding the hair root. If the scalp is regularly massaged with hair oil it will give the roots of the hair the extra strength, which is so vital for healthy growth of hair. It must be remembered that oil is the only food for the hair.

The growth of the hair can be further assured if little time and affectionate care is given. At least ten minutes a day, one should massage the scalp with hair oil. For the best results, oil with pure and time tested ingredients will strengthen the hair roots by giving them sufficient natural nourishment for a speedy and healthy growth.

Hair oil is also a must for cleansing the scalp. Everyday scalp accumulates lots of dust, dirt, grease and germs. If these foreign materials are allowed to stay long one is bound to have dry scalp. To keep the scalp clean one should massage the scalp with hair oil.

Dirt and dandruff are two great enemies of the hair. The remedy is again—hair oil.

Hair oil made from pure ingredients cools the head and keeps one fresh. Regular use of hair oil also helps one to a sound sleep.

For abundant, lustrous, healthy and beautiful hair the 4-point hair-care principles should be followed :—

- 1) The scalp should be massaged for at least 10 minutes with hair oil. It will rejuvenate even the fine pores of the hair roots.
- 2) The hair should be combed and brushed when it gets dry.
- 3) After bath the hair should be dried and then it should be dressed. Dressing the wet hair is injurious for the healthy growth of the hair.
- 4) The hair should be shampooed once a week to help clean the scalp from dirt, dust and dandruff.

If one strictly adheres to the 4 golden rules of hair-care and regularly uses a hair oil made of pure ingredients, one will certainly enjoy all the desired results.

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*A beautiful
bathroom...*



Sanitaryware
& Wall Tiles
made to
international
standards

...and Hindustan Sanitaryware & Somany-Pilkington's are there to fulfil your promise with their superb range of sanitaryware and ceramic wall tiles. Backed by continuous research at its own Applied Research Centre—which has already received recognition from the Government of India—the high quality products of Hindustan Sanitaryware are non-porous, hygienic, durable and most modern in design. Available in different fade-proof pastel shades plus sparkling white. Ceramic wall tiles, manufactured by Somany-Pilkington's in collaboration with world-famous Pilkington's Tiles Limited of U.K., are the best combination with Hindustan Sanitaryware to provide lasting elegance to your bathroom. Choose from "Snoflake" or "Galaxe" in a number of pleasing colours.

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Our record shows it. Some of the most critical components for the generation, distribution and utilisation of electric power are made by us. The automotive and ancillary industries depend on us for a wide range of special steels and sophisticated parts. Vital inputs for modernising the railways, strengthening our defence efforts, substituting imports in the machine building industry, offering a range of high quality components for complex metal assembly jobs and consumer durables. An important range : lifeblood for priority growth areas in our economy.

This is not all. At times we have stepped out to lend a helping hand to those who are in need. We have helped set up schools, energise wells in villages struck by drought, supported hospitals, relief efforts in flood affected areas, offered scholarships, jobs to the disabled.

Our achievements are only a step toward greater efforts. .
This stems from our sense of responsibility as a corporate citizen.
To reconcile our activities with the priorities of the nation.



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